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ABSTRACT

This is a selected bibliography of materials on physical education that were announced in the ERIC system. The citations are listed alphabetically by author. It is divided into two sections: ERIC abstracts and journal citations. The first contains abstracts of documents announced in "Research in Education" since its beginnings in 1966; the publication dates of documents go back as far as 1954. Citations include author, title, institution or publisher, publication date, number of pages, ED number, and availability through the ERIC Document Reproduction Service. The second section cites articles announced in "Current Index to Journals in Education." The information in these citations includes author, title, periodical, number of pages, publication date, ERIC descriptors, and annotations when appropriate. (JA)

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A SELECTED ANNOTATED BIBLIOGRAPHY ON PHYSICAL EDUCATION. PART 2 OF A SERIES ON HEALTH, PHYSICAL EDUCATION, AND RECREATION.

by Marvin Eyler

U.S. DEPARTMENT OF HEALTH
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FOREWORD

In building a nation on a relatively virgin continent, many Americans tended to get more physical education than they wanted. Many would have preferred relatively nonstrenuous tasks. Be that as it may, Americans today lead sedentary or nonvigorous lives, or else they exercise only portions of their bodies. Commonly, physical activities are limited in extent or scope, to a degree that the mental, emotional, and physical potentialities of physical education are minimally attained.

Physical education personnel, in carrying out physical education activities and in helping other educators, are keys to reversing nonproduction trends and to moving the nation toward balanced physical education in the schools and throughout the communities.

This clearinghouse incorporated health, physical education, and recreation (except outdoor recreation) into its scope on March 1, 1973. This bibliography is one specific effort to increase ERIC's value to the thousands of personnel responsible for a valued and valuable aspect of schooling. Our intention is to do much more in creating new documents as well as to build the data base and provide user services.

The cooperation of the staff, officers, and committees of the American Association for Health, Physical Education, and Recreation is essential for our success in providing for the idea and information needs of the AAHPER constituency. To this point such cooperation has been excellent. We acknowledge it with warm gratitude.

You may do further research on this topic by checking issues of Research in Education (RIE) and Current Index to Journals in Education (CIJE). Both RIE and CIJE use the same descriptors (index terms). Documents in RIE are listed in blocks according to the clearinghouse code letters which processed them, beginning with the ERIC Clearinghouse on Career Education (CE) and ending with the ERIC Clearinghouse on the Disadvantaged (UD). The clearinghouse code letters, which are listed at the beginning of RIE, appear opposite the ED number at the beginning of each entry. "SP" (School Personnel) designates documents processed by the ERIC Clearinghouse on Teacher Education.

In addition to using the ERIC Thesaurus, RIE, CIJE, and various ERIC indexes, you will find it helpful to be placed on the mailing list of the ERIC clearinghouses which are likely to abstract and index as well as develop publications pertinent to your needs and interests.

For readers uncertain how to use ERIC capabilities effectively, we recommend the following materials which are available in microfiche and xerographic, or "hard," copy through the ERIC Document Reproduction Service: (a) How To Conduct a Search Through ERIC, ED 036 499, microfiche $.65; hardcopy $3.29; (b) Instructional Materials on Educational Resources Information Center (ERIC). Part Two. Information Sheets on ERIC, ED 043 580,

microfiche $.65; hardcopy $3.29. Item "b" is available as a complimentary item, while the supply lasts, from this clearinghouse. The last page of this publication is an "ERIC Order Blank" which gives instructions for ordering materials and can be used for ordering.

--Joel L. Burdin
Director

February 1974

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This is a selected bibliography of materials on physical education that were announced in the ERIC system. The citations are listed alphabetically by author. It is divided into two sections: ERIC abstracts and journal citations. The first contains abstracts of documents announced in Research in Education since its beginnings in 1966; the publication dates of documents go back as far as 1954. Citations include author, title, institution or publisher, publication date, number of pages, ED number, and availability through the ERIC Document Reproduction Service. The second section cites articles announced in Current Index to Journals in Education. The information in these citations includes author, title, periodical, number of pages, publication date, ERIC descriptors, and annotations when appropriate. (JA)

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To expand a bibliography using ERIC, descriptors or search terms are used. To use a descriptor: (1) Look up the descriptor in the SUBJECT INDEX of monthly, semi-annual, or annual issue of Research in Education (RIE). (2) Beneath the descriptors you will find title(s) of documents. Decide which title(s) you wish to pursue. (3) Note the "ED" number beside the title. (4) Look up the "ED" number in the "DOCUMENT RESUME SECTION" of the appropriate issue of RIE. With the number you will find a summary of the document and often the document's cost in microfiche and/or hardcopy. (5) Repeat the above procedure, if desired, for other issues of RIE and for other descriptors. (6) For information about how to order ERIC documents, turn to the back pages of RIE. (7) Indexes and annotations of journal articles can be found in Current Index to Journals in Education by following the same procedure. Periodical articles cannot be secured through ERIC.

TOPIC: *A Selected Annotated Bibliography on Physical Education. Part 2 of a Series on Health, Physical Education, and Recreation.*

DESCRIPTORS TO USE IN CONTINUING SEARCH OF RIE AND CIJE:

*Annotated Bibliographies
Bibliographies
Educational Research
*Physical Education
Research

*Asterisk(s) indicate major descriptors.

ERIC ABSTRACTS

Aldrich, Anita. "Cooperative Development of Design for Long-term Research Project Directed toward the Identification and Evaluation of a Conceptual Framework for the Curriculum in Physical Education, Grades K-16." Washington, D.C.: American Association for Health, Physical Education, and Recreation, 9 May 1967. 30 pp. ED 012 814. MF & HC.*

A tentative design was developed for a research project to develop a conceptual framework for a functional curriculum in physical education for grades K-16. The research plan will be used as a basis for future efforts of the American Association for Health, Physical Education, and Recreation to give national leadership in the improvement of physical education curricula and programs. The research effort is expected to extend over 5 to 10 years. Some key issues and problems facing the physical educators in improving school programs are identified and discussed in this report.

American Association for Health, Physical Education, and Recreation. Approaches to Problems of Public School Administration in Health, Physical Education, and Recreation. Proceedings of the National Conference of City and County Directors, Washington, D.C., 8-10 December 1968. Washington, D.C.: the Association, 1969. 158 pp. ED 040 499. MF only.

This report contains a collection of papers selected from those presented at the conference. Topics covered include human relations in the interactions of ethnic groups, crowd control at athletic events, trends in health education on drugs, sex education and family life, administrative structure, year-round schools, physical education programs, and physical education facilities. Besides papers and speeches, the document contains summaries of group discussions on the topics covered in formal presentations. Supportive materials are appended.

---. "Bibliography on Research in Psychomotor Function, Physical Education, and Recreation for the Mentally Retarded." Washington, D.C.: the Association, 20 October 1966. 39 pp. ED 015 583. MF & HC.

This alphabetized bibliography lists 490 articles, reports, unpublished works, and papers concerning recreation, physical education, and psychomotor functions. The bibliography's citations are relevant to the educable, trainable, severely, and profoundly mentally handicapped, the brain damaged, and those with neuropathological conditions.

---. A Guide for Programs in Recreation and Physical Education for the Mentally Retarded. Washington, D.C.: the Association, 1968. 52 pp. ED 029 444. MF only.

A project on recreation and fitness for the mentally retarded and the

*Available in microfiche (MF) and hardcopy (HC). See p. 69 for ordering information.

objectives of such programs are reviewed. Activity areas surveyed include physical fitness, motor ability, sports skills, special events, and recreation. Also considered are the following: testing and measuring individual progress, including psychomotor and physical fitness tests, developmental profiles, and awards; medical examinations; and facilities, equipment, and supplies. In-service education and training are discussed, as well as activities for volunteers and parents; public relations and information needs are considered. A guide for program evaluation and a 38-item bibliography are provided.

---. Knowledge and Understanding in Physical Education. Washington, D.C.: the Association, 1969. 134 pp. ED 034 731. MF only.

This manual represents an attempt to summarize and organize the intellectual content of physical education (i.e., the facts and understandings upon which the exercises and activities of the physical education programs are based). It is designed for a two-fold purpose: (a) to serve as a basis for instruction that lends itself to evaluation through written tests (in particular, the standardized tests being developed by Educational Testing Service of Princeton in conjunction with American Association for Health, Physical Education and Recreation and (b) to be used, evaluated, and refined by classroom teachers and physical education specialists. The essential skills and concepts of physical education are outlined under three major headings: Activity Performance, Effects of Activity, and Factors Modifying Participation in Activities and Effects of Participation. Each item is accompanied (a) by a description of the skill or concept, its importance, and its application or relationship to performance and (b) by a scientific analysis. Each concept has been graded according to its appropriateness for the elementary, junior, and/or senior level of instruction, so that there is a progression from the simple to the more complex concept. Also included are brief reviews of the nature and use of standardized tests and of the manual itself.

---. Perceptual-Motor Foundations: A Multidisciplinary Concern. Proceedings of the Perceptual-Motor Symposium (Washington, D.C., May 8-10, 1968). Washington, D.C.: the Association, 1969. 182 pp. ED 037 835. MF only.

These proceedings include addresses by Logan Wright on highlights of human development from birth to age 11, by Leonard A. Cohen on development and function of the mechanisms of perception, by Eric Denhoff on motor development as a function of perception, and by Alan Hein on exposure history in spatial-motor development. Also provided are reports by William T. Braley on the Dayton program for developing sensory and motor skills in 3-, 4-, and 5-year-old children, by Alice D. Coffman on personalizing early education, and by Louis Bowers on a program of motor development activities. A multidisciplinary exchange on perceptual motor development, group discussions on learning and on future needs, and a conference summary are included. Appendices list conference

leaders, organizational representation, participants and observers, and questions raised by participants.

---. Physical Activities for the Mentally Retarded; Ideas for Instruction. Washington, D.C.: the Association, 1968. 146 pp. ED 029 445. MF only.

A viewpoint regarding physical education and recreation for the retarded is presented, and the development of fundamental motor skills, including postural orientation and locomotor and other skills, is detailed. Teaching techniques are suggested, and activities are outlined on three levels: level 1, basic movement patterns, fundamental motor skills, initial perceptual development, primitive conceptual formation, and development of self-awareness, body concept, and self-image; level 2, activities of low organization in which patterns, movements, and skills developed at level 1 are applied to increasingly complex situations; and level 3, adapted and lead-up activities in which patterns, movements, and skills are used to prepare the individual for participation in sports, games, and higher organized activities. Sample units on bowling and softball (level 4 activities), a classification index of all activities, a 15-item annotated bibliography, and a form for evaluation of and suggestions for the document are also included.

---. A Practical Guide for Teaching the Mentally Retarded to Swim. Washington, D.C.: the Association, 1969. 161 pp. ED 035 158. MF only.

A guide for teaching the retarded to swim begins with a general discussion of retardation, the need for individualization, and staff qualifications. Factors discussed in program organization and administration include community agencies, staff training, the use of records and forms, and first aid procedures. Suggested methods consider perceptual motor abilities, a multisensory approach, the sequential breakdown of skills, transfer of training, motivation, awards, discipline, swimming readiness, orientation, entering the water, innovations, assistive devices, movement exploration, and circuit and interval training. Step-by-step procedures for mastering different floating and swimming positions are described and illustrated by sketches. A variety of water stunts and games is included as are recommendations for pool facilities. Behavior modification techniques are discussed and photographs are provided throughout.

---. Preparing Teachers for a Changing Society. Proceedings of the National Conference of City and County Directors. (7th, Kansas City, Mo., Dec.11-14, 1969). Washington, D.C.: the Association, 1970. 79 pp. ED 041 821. MF only.

This document contains proceedings of the conference attended by 286 participants, including public school personnel, those from teacher preparation institutions, and other educators. There are four main sections, one for each topic discussed. Main speeches are presented

in full: "Preparation of Teachers for the Inner City" by Robert T. Wheeler; "Current Needs in Professional Preparation" by Donald Hair; and "Interrelationships of the Physical Education Program and Personnel in the Total School Community" by Paul Briggs. Four short presentations constitute the fourth topic: "Student Internships as Professional Laboratory Experiences"; "Inservice Training for Beginning Teachers as Professional Laboratory Experiences"; "Preparing Public School Administrators for Health, Physical Education, and Recreation"; and "Professional Standards and Professional Negotiation." Each speech is followed first by summaries of the comments of a panel of reactors and then by summaries of several small group discussions on various aspects of each speech topic. A roster of participants' names and addresses is included along with a list of American Association for Health, Physical Education, and Recreation officers, district coordinators, and conference personnel.

---. Proceedings of the Symposium on Federal Support Programs for Health, Physical Education, Recreation (2nd, Washington, D.C., January 28-31, 1968). Washington, D.C.: the Association, 1968. 224 pp. ED 041 771. MF only.

The purpose of this symposium report was to provide information regarding resources for those planning projects in health, physical education, and recreation. Included are an overview of related federal programs, four accounts of successful local programs, guidelines for developing proposals, details of federal support programs, examples of ways in which federal support is being used, and suggestions made by symposium participants for stimulating action at the local level.

---. School Safety Policies with Emphasis on Physical Education, Athletics and Recreation. Washington, D.C.: the Association, 1968. 33 pp. ED 044 276. MF only.

This booklet outlines principles of hazard control, school accident problems, and the need for guidelines and policies. Suggested general school safety policies, guidelines for courses in safety education and for the provision of facilities and supplies, policies for the administration of first aid and emergency care, and procedures for reporting and investigating hazards and accidents are provided. Emphasis is given to policies affecting the physical education, athletics, and recreation programs in the school.

---. "Selected Bibliography for Outdoor Education." Washington, D.C.: the Association, 1967. MF & HC.

Sixty-one books and articles published between 1940 and 1967 are listed. Although the major portion of the bibliography is devoted to outdoor education, also included are publications on recreational activities, conservation, national and state parks, camping, and outdoor crafts.

--- and Athletic Institute. College and University Facilities Guide for Health, Physical Education, Recreation, and Athletics. Washington, D.C.: the Association; Chicago: the Institute, 1968. 202 pp. ED 032 722. MF only.

This guide presents information concerned with the planning of areas and facilities for athletics, recreation, outdoor education, and physical and health education. Swimming pools, service areas, ice skating, field houses, arenas, and stadiums are among the many facilities which are considered. Included are many diagrams and sketches giving specific measurements. A check list is provided.

--- and Athletic Institute. Planning Areas and Facilities for Health, Physical Education, and Recreation by Participants in National Facilities Conference. Rev. ed. Washington, D.C.: the Association; Chicago: the Institute, 1965. ED 014 848. Not available from EDRS.

Specific information is provided in this guide to planners of areas and facilities for athletics, recreation, outdoor education, and physical and health education. Part one concerns basic concepts pertinent to the area under consideration. The aims of physical education, health and safety education, and recreation are listed. Planning principles, planning units, and area types are discussed. Part two deals with outdoor areas and facilities. Planning techniques are outlined. Specific guidelines for developing recreation, park, school, outdoor, and outdoor education areas are given. Part three is concerned with indoor facilities. The discussion is broken into elementary and secondary schools, colleges and universities, recreation buildings, and general building features. Part four pertains to aquatic areas and facilities. Design and construction of swimming pools are considered from a technical viewpoint. Development of waterfronts and beaches is also discussed. Part five deals with health and safety areas and facilities. Facility needs related to the school health program in the light of the school's place in the community are discussed in one chapter; safety education areas dealing with driver education are discussed in the other. Throughout, specific information is given to guide the reader. Several appendices include information about the national conference on areas and facilities for health, physical education, and recreation; specific diagrams of various types of athletic courts; rules sources; requirements of the aging and disabled; check lists for planners; and a glossary.

--- and Joseph P. Kennedy, Jr. Foundation. Special Olympics Instructional Manual. . . from Beginners to Champions. Washington, D.C.: the Association and the Foundation, 1972. 146 pp. Available from the Association. ED 069 076. MF only.

This manual is intended to assist teachers, volunteers, and parents in providing physical education or recreation activities for mentally

retarded children. Presented in each of the four basic activity areas (fitness and conditioning, track and field, volleyball, and swimming) are activities, drills, methods, teaching/coaching suggestions, and sequenced progressions for children at all age and performance levels. Basic, intermediate, and advanced fundamentals of each activity are described, with progressive teaching sequences and detailed practice schedules or lesson plans. Also explained is the philosophy and rationale for physical education and recreation programs for the retarded, with special reference to the Special Olympics (a yearly national sports competition for retarded children). Line drawings illustrate the manual.

--- and National Recreation and Park Association. Physical Education and Recreation for Handicapped Children; Proceedings of a Study Conference on Research and Demonstration Needs. Washington, D.C.: the Association, 1968. 91 pp. ED 034 345. MF only.

Included are articles on the status of physical education for the retarded, the visually handicapped, the hearing impaired, and the emotionally disturbed. Concepts in research and demonstration needs in physical education and recreation for the physically handicapped are presented. Papers consider the status of recreation for the handicapped as related to community agencies, institutions, and schools. Also discussed are research on recreation camping, an assessment and evaluation of projects, methods of collecting and disseminating information, legislation, recruitment and training, and available services.

Arnheim, Daniel D., and others. Principles and Methods of Adapted Physical Education. St. Louis, Mo.: C. V. Mosby Co., 1969. 419 pp. ED 033 509. Not available from EDRS.

Programs in adapted physical education are presented, preceded by background information on services for the handicapped, psychosocial implications of disability, and the growth and development of the handicapped. Discussed are organization and administration; class organization; facilities; exercise programs (selection, assignment, and teaching); an exercise for tension reduction; and adapted games and sports. The following specific disabilities and programs for the unfit are considered: posture malalignment; cardiovascular disorders; musculoskeletal disorders (acute, chronic, and congenital); mental retardation; emotional disturbances; sensory disorders; neurological and other disorders; and adult fitness and aging. Also included are photographs, a glossary, and four appendices with exercise diagrams.

Athletic Institute. The Recreation Program. Chicago: the Institute, 1963. 346 pp. ED 032 949. Not available from EDRS.

This book provides directional pointers on the reasons for and ways of developing and integrating several program areas in the field of recreation. Suggestions are given on the uses of the book by persons involved with or interested in recreation. The book provides a composite picture of the major aspects, kinds, and forms of recreation activity. Specific areas covered are arts and crafts, dance, drama, games, sports and athletics, hobbies, music, and outdoor recreation. Reading, writing, and speaking; social recreation; special events; and voluntary service are also included. At the end of each specific area, a resource guide and/or bibliography is presented.

Baldwin, William O., and others. "Curriculum Guide for Physical Education: Kindergarten and Ungraded Primary." St. Louis, Mo.: St. Louis Public Schools, 1969. 87 pp. ED 038 169. MF & HC.

This physical education program consists of teaching basic skills and using these skills in implementing a progressive sequence from kindergarten through ungraded primary grades. A section on games includes a description of their general purpose, directions for playing each game, and teaching suggestions. Included are 11 games to be introduced at the kindergarten level; 27 group games and 11 classroom games for the next level; 26 group games and 8 classroom games for a subsequent level; and 25 group games and 6 classroom games for the final level. The rhythm program is divided into fundamental rhythms, singing games, and dances. This section includes a list of records as well as rhythmic activities for each level. A section on stunts describes their purpose, gives teaching suggestions, and recommends safety precautions. Diagrams of stunts at all developmental levels are illustrated. The final section contains a physical fitness test. The guide was planned to be used in conjunction with "Elementary School Physical Education Handbook."

Best, Helen, and others. "The Effect of Structured Physical Activity on the Motor Skill Development of Children with Learning Disabilities (Minimal Brain Dysfunction)." Memphis, Tenn.: Memphis State University, August 1967. 67 pp. ED 021 357. MF & HC.

Students in 24 perceptual development classes for the minimally brain injured were studied to determine the effect of structured physical activity on motor skill development, to compare this effect with the effect of unstructured activity, and to determine the effect of an increased amount of time of physical activity. The Johnson Test of Motor Skill Development was administered before and after an 8-week program. The experimental group of classes was given structured physical activities; the control group ($P<.01$) with increased motor skill development occurring in the experimental group. Schedules and diaries recording structured activities used in the experimental group are included. The Johnson Test, four tables, four illustrations, and a 19-item bibliography are provided.

Bicknell, John E., and others. "Relationship between Physical Performances of School-Age Children and Their Ages, Heights, and Weights." St. Paul, Minn.: State Department of Education, 1964. 109 pp. ED 033 676. MF & HC.

Relationships between physical performance and the characteristics of age, height, and weight of pupils were investigated to form a basis for an improved classification index to assist in evaluating physical fitness test scores. The youth fitness test of the American Association for Health, Physical Education, and Recreation was administered to 28,000 children, in grades 4 through 12, in a sample of 100 schools. Performance scores, grade, age, height, and weight were used to develop norms for the test. A major finding is the necessity for taking a pupil's age, height, and weight into account in the interpretation of his test performance.

Blamer, William C. "A Study of Physical Education in the Public Junior and Community Colleges of the Continental United States." Ph.D. dissertation, Michigan State University, 1967. Available from University Microfilms. ED 015 756. Not available from EDRS.

Present community college physical education programs are compared with standards recommended by professional organizations, thus providing athletic directors with suggestions for possible improvements. Junior colleges were grouped by enrollment and 450 questionnaires sent to their physical education directors; 324 replied. The data were examined according to three areas: (a) the general physical education service program, (b) intramural activities, and (c) intercollegiate athletic programs. It was found for the first area that the provisions for instruction and equipment vary greatly; for the second area that most colleges offer such a program under several budgeting procedures; and for the third area that most colleges participate, but with different medical requirements, accident coverage, and funding. The primary recommendation is that colleges should provide enough financial and administrative support to make up the deficiencies in all three programs. The author suggests further studies of (a) the professional preparation of the physical education staff, (b) new program standards designed specifically for the junior college, (c) regional programs, (d) the nationwide status of health education programs for the junior college, and (e) criteria for students' exemption by age from physical education activities.

Buell, Charles E. Physical Education for Blind Children. Springfield, Ill.: Charles C. Thomas [301-327 East Lawrence Avenue], 1966. ED 016 327. Not available from EDRS.

A practical rather than a theoretical reference guide, this book discusses the need of the blind or visually impaired child for physical education. Past and present programs in public and residential schools, recreation and leisure time activities (a guide for parents), sports and interscholastic competition, active games, contests, relays, and wrestling are described. The study also considers

physical fitness, achievement scales, and grade levels. An appendix lists successful blind teams and athletes and several exercises and tests. A selected annotated bibliography and index are included.

Burnham, Stan, and Lynn W. McCraw. "Resistive Exercises in the Development of Muscular Strength and Endurance." Austin: University of Texas, 1963. 107 pp. ED 003 079. MF & HC.

This study was concerned with a comparison of isotonic, isometric, and speed exercise programs as a means of developing muscle strength, endurance, speed, and power. Subjects for the investigation were 93 freshmen and sophomore men enrolled in a physical education class. After measurement of initial status in the attributes under consideration, the subjects engaged in the appropriate programs three times a week for 9 weeks. Measurement of final status was made using the same instruments that were used to determine initial status. Data were analyzed and the results provided the basis for these conclusions: (a) no single method was adequate in achieving maximum development of all four attributes (strength, endurance, speed, and power of the muscles); (b) the extent to which a particular method is effective may depend on the initial status of the individual in the attribute in question; (c) the isotonic and isometric methods appeared to be best for developing strength for persons who are initially strong; (d) resistive exercises did not appreciably affect speed of the muscle; and (e) isotonic and speed movements were more effective than isometric contractions in improving explosive power for individuals already possessing some of this attribute. Implications for further research are presented.

California State Department of Education, Bureau of School Planning. "Facilities for the Educationally Handicapped." Sacramento: the Bureau, June 1967. 23 pp. ED 023 265. MF & HC.

California State Facility and Program Requirements for Educationally Handicapped Pupils in California are detailed. Contained is a step-by-step outline of procedures to be followed for establishing such facilities, as well as some background information for relating classroom size standards to three general categories of educationally handicapped. A section entitled "Educational Programs and Facilities" contains a discussion of legal information, enrollment projections, program objectives, and facility standards. Space diagrams and state aid forms are also included.

Carr, Dorothy B., and others. "Sequenced Instructional Programs in Physical Education for the Handicapped." Los Angeles, Calif.: Los Angeles Unified School District, 1970. 353 pp. ED 056 205. MF & HC.

These curriculum guidelines for a comprehensive physical education program consist of developmentally sequenced skills and instructional activities appropriate for handicapped children from early preschool

age (18 months) through high school. Suggested activities and materials are arranged in color-coded sections on motor and movement skills, playground and recreation skills, rhythm, swimming, and physical fitness. Information provided for each activity includes level of difficulty, sequence/teaching progressions, suggestions for lesson implementation, source materials, and codes to indicate appropriateness to the handicapping condition.

Collins, George J., and J. Scott Hunter. Physical Achievement and the Schools. Washington, D.C.: U.S. Government Printing Office, 1965. 36 pp. ED 048 618. MF only.

This report, prepared in cooperation with the President's Council on Physical Fitness, presents data on some aspects of the physical activity programs in public and private elementary and secondary schools and the use of standardized tests of physical achievement as part of the schools' overall appraisals of the physical fitness of their pupils. It also provides data on the test results of the pupils in schools having such testing programs. The scope of this study is limited to the extent to which schools have implemented the basic recommendations of the President's Council on Physical Fitness. These recommendations focus on health appraisals and on physical activity and testing programs in schools. Such programs are designed to contribute to the development of strength, endurance, flexibility, and other physical qualities necessary for good health and better living. Nearly all schools were found to provide physical education programs at some grade level; 48 percent of the schools were found to use a standardized test to measure selected physical abilities of some of their students.

Cratty, Bryant J.. Developmental Sequences of Perceptual-Motor Tasks, Movement Activities for Neurologically Handicapped and Retarded Children and Youth. Freeport, N.Y.: Educational Activities [P.O. Box 392], 1967. 95ppp. ED 023 201. Not available from EDRS.

Intended for special education and physical education teachers, this handbook presents selected developmental sequences of activities based on the analysis of perceptual motor characteristics of groups of retarded and neurologically handicapped children. Four classifications of children and their perceptual motor characteristics are discussed: the trainable retarded, the educable retarded, mongoloids, and the neurologically handicapped. Teaching guidelines are given for presentation of motor activities; specific programs are outlined for evaluation and graded development. Areas covered are body image (perceptions of the body and its position in space), balance, locomotion, agility, strength and endurance plus flexibility (fitness), catching and throwing balls, manual abilities, and moving and thinking. The importance of the initial evaluation of children in program planning is reviewed, and model programs for the four classifications of children are outlined. A glossary and a 123-item bibliography, which includes sources of games and similar activities, are provided.

---. Perceptual-Motor Behavior and Educational Processes. Springfield, Ill.: Charles C. Thomas [301-327 East Lawrence Avenue], 1969. 265 pp. ED 031 001. Not available from EDRS.

Addressed to elementary school and special class teachers, the text presents research-based information on perceptual-motor behavior and education, including movement and the human personality, research guidelines, and movement activities in general education. Special education is considered; perceptual motor abilities are discussed with reference to the blind, the clumsy child with minimal neurological handicaps, the mentally retarded, and the orthopedically handicapped. An appendix provides a screening test for evaluating perceputal motor attributes of neurologically and mentally handicapped children as well as a mobility orientation test for the blind.

Crawford, Wayne H. "A Guide for Planning Indoor Facilities for College Physical Education." New York: Columbia University, Institute of Field Studies, 1963. 164 pp. ED 031 910. MF & HC.

Following a general consideration of the functional aspects of planning facilities and the relationship between program and facilities, a detailed presentation is made of planning buildings for college and university indoor physical education activities. Recommendations are made with regard to design, structural and functional features of auxiliary gyms, special activity areas, social and recreation facilities, and service facilities. In considering facilities common to all indoor areas (surfaces, lighting, acoustics, etc.), arguments pro and con are presented pertaining to commonly used materials and their application. Also included is a consideration of usual errors in planning and construction.

Crenshaw, William A. "Effects of Orthokinetic Segments upon Motor Responses of Normal Male College Students." Austin: University of Texas, August 1967. 69 pp. ED 016 269. MF & HC.

This study assesses the effects of orthokinetic segments upon the motor responses of normal male college students performing the vertical jump and the standing broad jump. The various placings of the elastic and inelastic fields of the segments upon the agonist and antagonist thigh muscles of students were noted and compared with performance scores to determine if the segments facilitated, inhibited, or failed significantly to affect performance. Orthokinetics may assist in the development of coordination and motor skills by external means and is a method of studying the nervous system of the

live organism. Concepts of the nervous system, derived from neuro-anatomists and neurophysiologists, are related to orthokinetics. The sample was divided into a control and three treatment groups. Measurement techniques and statistical procedures are outlined. No immediate decisive effects of the segments on a normal subject's ability in either the vertical jump or standing broad jump were noted. Longer exposure to the segments may be necessary. A discussion of the results, including a consideration of factors influencing the results, is provided.

Crystal Lake Community School District 47. "Outdoor Education Primary Resource Guide. A Reprint of the Resource Guide for Teaching in-about-for the Outdoors, 1967." Crystal Lake, Ill.: the District, 1967. 66 pp. ED 035 473. MF & HC.

Designed for use with students in the first, second, and third grades, this resource guide is one of a series of three booklets (primary, intermediate, and junior high levels) developed by the Crystal Lake, Illinois School District under a Title III Appropriation of the Elementary and Secondary Education Act. Outdoor education activities are suggested for incorporation into language arts, mathematics, art, physical education, music, and social studies. Suggested activities for science and social studies classes are presented by grade levels.

Daniels, Arthur S., and Evelyn A. Davies. Adapted Physical Education, Principles and Practice of Physical Education for Exceptional Students. 2nd ed. New York: Harper and Row, 1965. ED 015 594. Not available from EDRS.

This book has three purposes: (a) to show how physical education activities may be adapted for exceptional students at all levels of school; (b) to serve as a practical guide to physical education personnel who wish to work for full development of each student; and (c) to serve as a text for students in training, teachers, and therapists. Part one defines the problem in terms of children to be served, society's changing attitudes towards those with disability, and adjustment problems. It also reviews anatomy, kinesiology, and physiology of exercise. Part two considers physical education in relation to children with specific disabilities such as amputations, heart conditions, cerebral palsy, epilepsy, poliomyelitis, visual and auditory handicaps, and special health conditions. Programs

for children with emotional instability, behavior problems, or mental retardation are discussed briefly. Part three considers a number of administrative and organizational topics and the values of aquatics and camping. A final chapter examines several questions related to life after the school program is completed. Selected bibliographies follow each chapter.

Davis, Harold S. "Team Teaching: A Selected Annotated Bibliography." Cleveland, Ohio: Educational Research Council of Greater Cleveland, 1967. 56 pp. ED 023 159. MF & HC.

Over 300 items on team teaching published since 1958 are cataloged as follows: books, pamphlets, and teaching films, 48; elementary school articles, 55; secondary school articles, 200. Secondary school articles are further divided into 10 topics: business education, English, fine arts, foreign languages, mathematics, physical education, practical arts, science, social science, and general.

Davis, Patricia A. Teaching Physical Education to Mentally Retarded Children. Minneapolis, Minn.: T. S. Denison and Co., 1968. 60 pp. ED 029 451. Not available from EDRS.

Methods for teaching physical education activities and skills to mentally retarded children are presented. General objectives are listed, and the physical education programs is outlined. Hints are offered for teaching the retarded child; basic skills and rhythms are described. The following are detailed: rhythm games, a volleyball unit and lead-up games, softball skills and lead-ups, basketball hints, soccer skills, a physical fitness activities unit, a stunts and tumbling unit, and relaxation activities. A summary reviews objectives, problems, and methods of physical education.

Delamater, James B. The Design of Outdoor Physical Education Facilities for Colleges and Schools. New York: Teachers College Press [Teachers College, Columbia University], 1963. 135 pp. ED 028 626. MF & HC.

Specialized information is presented for those involved in assuring improvement in the outdoor physical education facilities of the future. The materials included are intended to be useful to architects, engineers, and designers generally; to program specialists, administrators, and consultants in education; and to students preparing for professional careers in physical education. Specific chapters discuss the following topics: (a) comprehensive planning, (b) planning objectives, (c) site selection, (d) common problems of space utilization, (e) the orientation of outdoor physical education facilities, (f) physical education play surfaces, (g) sports lighting, and (h) service facilities.

Dexter, Genevie. "Instruction of Physically Handicapped Minors in Remedial Physical Education." Rev. ed. Sacramento, Calif.: State Department of Education, Bureau of Health Education, Physical Education, and Recreation, 1967. 22 pp. ED 022 312. MF & HC.

The 1963 California legislature enacted regulations that enable local school districts to provide appropriate physical education programs for severely physically handicapped children who cannot be served in regular programs. After a summary of regulations on eligibility, class size, and reimbursement procedures, attention is given to the following: the design of physical education programs to meet individual needs, procedures for initiating instruction in remedial physical education, guidelines for judging severity of disabilities, apportionment of financial allowances, requirements for a suitable teaching station, and essential equipment and supplies. Course objectives, policies for developing a course of study, and class procedures and organization are stated; an outline of course content is provided. Two appendices include the medical evaluation form for a physician's recommendation for physical education and other physical activities.

---, and Doyt Early. "Facilities and Space Allocations for Physical Education Outdoor Teaching Stations for Elementary and Intermediate Public Schools." Sacramento, Calif.: State Department of Education, 1967. 29 pp. ED 016 371. MF & HC.

The purpose of this bulletin is to present recommendations for minimum outdoor facilities and space allocations for a balanced physical education program for grades K-8 in public schools. Only space requirements for physical education teaching stations are described. Included are recommendations for site planning and space arrangements as they are related to grade level, types of surfacing, and pupil-space ratios. Suggestions are made for apparatus and game area space allocations. Also included are charts, diagrams, and matrices pertaining to the K-8 physical education program.

Dickey, Donald D. "Athletic Lockers for Schools and Colleges; Their Design--Selection--and Purchase with Functional Tips and Suggestions for the Modern Athletic Locker Room." Minneapolis, Minn.: the author, 1967. 29 pp. ED 031 041. MF & HC.

Information is provided relative to the design, selection, and purchase of locker equipment for athletic and physical education use. Some suggestions are for both applications; some are general to any locker dressing room. Among the topics discussed are construction and joining of lockers, ventilation and drying, administrative problems, and security.

Dodson, Taylor, and Helen Staurt. "Indoor Play Activities." Raleigh, N.C.: State Board of Education, Department of Public Instruction, October 1956 . 42 pp. ED 015 039. MF & HC.

This guide was prepared for North Carolina elementary school teachers to assist them in planning indoor physical activities for children. The guide is divided into three sections--games, stunts, and relays. The grade level, appropriate equipment, formation, and necessary rules are described for each game and relay. The stunts are applicable to all grades and are briefly described.

Educational Facilities Laboratories. "Conventional Gymnasium vs. Geodesic Field House. A Comparative Study of High School Physical Education and Assembly Facilities." New York: the Laboratories, 1961. 20 pp. ED 031 038. MF & HC.

A description is presented of the design features of a high school's geodesic dome field house. Following consideration of various design features and criteria for the physical education facility, a comprehensive analysis is given of comparative costs of a geodesic dome field house and conventional gymnasium. On the basis of the study it would appear that school systems seeking better accommodation for their physical education program would do well to consider the use of a geodesic structure. Graphic illustrations are included.

Ellis, M. J., and R. P. Hubbard. "Human and Mechanical Factors in Ergometry." Urbana: University of Illinois, Children's Research Center, 1970. 31 pp. ED 043 500. MF & HC.

Analysis of the human and mechanical factors inherent in ergometry suggest many strategies for the improvement of experiments related to exertion. The resistive principles of gravitation, friction, elasticity, viscosity, magnetism, and inertia used in ergometers impose different restraints on experiments. The suitability of different resistive principles to differing experimental situations is discussed. The mechanical concept of work has led to confusion in the quantification of exertion, and units of impulse are suggested as preferable when irreversible transformations of chemical energy in human muscle are considered. The interaction of the subject's structure and the mechanics of the resistive devices require the equation of subjects geometrically in both cross-sectional studies and within-subject comparisons. The differential rates of degradation of physiological and psychological adaptation (skill) over time allow the disentangling of the two sets of adaptations resulting simultaneously from practice.

Fait, Hollis F. Special Physical Education--Adapted, Corrective, Developmental. Philadelphia, Pa.: W. B. Saunders Co., 1966. ED 016 319. Not available from EDRS.

This book, written for prospective physical education teachers in a variety of settings, has three objectives: (a) to introduce briefly the nature of various handicapping conditions, (b) to delineate

their psychological implications, and (c) to suggest suitable games and activities. Historical background, a basis for understanding the handicapped, administrative principles, and characteristics of an effective adapted physical education program are provided. The following disorders are considered: visual handicaps, auditory handicaps, cerebral palsy, orthopedic defects, heart conditions, convalescence, nutritional disturbances, other physical conditions requiring adapted physical education, mental retardation, social maladjustment and mental illness, and aging. The following activities and topics are treated: basic skill games, rhythms and dance, individual sports, dual games, team games, swimming, weight training, outdoor education, corrective body mechanics, and developmental programs for physical fitness. An appendix includes suggested films and filmstrips for teachers, film sources, record sources, professional organizations, societies and associations, and periodicals.

---, ed. "Curriculum Guide for Teaching Physical Education to the Profoundly and Severely Retarded." Mansfield Depot, Conn.: Mansfield Training School, 1969. 18 pp. ED 039 670. MF & HC.

For use with the profoundly and severely retarded, this guide to physical education curriculum describes methods and techniques, objectives, and core activities. The following are also considered: supplementary activities for the hyperactive and emotionally disturbed; suggestions for the teacher; and evaluation, including records, motor skills tests, and behavior rating scales.

Gabrielsen, M. Alexander, ed. Swimming Pools, a Guide to their Planning, Design and Operation. Fort Lauderdale, Fla.: Hoffman Publications, June 1969. 224 pp. ED 033 566. Not available from EDRS.

Information is presented regarding all phases of swimming pool development and operation from earliest planning considerations to final programming. This comprehensive book covers (a) the steps involved in planning a pool; (b) designing the pool; (c) water circulation, filtration, and treatment; (d) community pools, school and agency pools, and pools for competition; (e) portable and aboveground pools, (f) pool equipment and accessories; and (g) the bathhouse and auxiliary services. Both indoor and outdoor pools are considered, as well as all types of permanent and temporary enclosures. Pool administration and operation are discussed, including budgeting and maintenance and safety procedures. Included in the appendices are worksheets for use in determining the pool design, check lists for pool planning, suggested ordinances and regulations, and an actual feasibility study that secured a new pool for an Illinois town. Photographs and diagrams are included throughout the book.

Glassow, Ruth B., and others. "Improvement of Motor Development and Physical Fitness in Elementary School Children." Madison: University of

Wisconsin, 1961. 93 pp. ED 002 927. MF & HC.

Children in the first, third, and fifth grades in a selected elementary school were exposed to an experimentally developed program of motor activities as part of a physical education curriculum designed to challenge a child. Performance measures in the standing broad jump, the 30-yard dash, the overarm throw, the pull-up, and shuttle run were taken at the beginning of the study and at the end of the first and second year. Since mean coordination measures from 6 to 12 years of age differed only slightly, improvement in the mean scores for the run and jump in these years can be attributed in large degree to skeletal growth; the slight coordination changes that occurred may be due to practice rather than to an age maturation factor. Specific muscle groups can be strengthened, between 6 and 12 years, through participation in a school physical education program; gains are greater when efforts are made to stress vigorous activity.

Gober, Billy, and others. "Primary School Physical Education through Movement Exploration." Practical Paper No. 26. Athens: University of Georgia, Research and Development Center in Educational Stimulation, September 1969. 165 pp. ED 038 712. MF & HC.

This program was designed to develop skills of movement which not only contribute to successful participation in games and sports but which are necessary in everyday life as well. The sequence of activities was planned to involve the child in a particular segment of movement, to identify types of movement, and to solve problems by using movement. Verbal cues were designed to motivate the child to find out more about himself. The guide contains 58 lessons, each of which teaches a specific fundamental movement but also may contribute to others. Reviews to follow completion of a skill series are not included, but are encouraged by the authors. Appendices discuss equipment, exploration materials, running activities, and suggested accompaniment music.

Goheen, Royal L. "The Development and Evaluation of Three Types of Physical Education Programs for Educable Mentally Retarded Boys." Final Report. Boston: Boston University, School of Education, 5 January 1967. 264 pp. ED 012 141. MF & HC.

Three physical education programs, skill oriented, play oriented, and free-play oriented, were developed. These programs were examined, initially, by seven experts and then subjected to a pilot study. The revised programs were taught by research assistants to six experimental groups, which included 82 boys at two state schools for the mentally retarded. The instructional period was 39 class hours (13 weeks) in duration, exclusive of time taken for purposes of evaluation. The programs were evaluated on the basis of pretests and post-

tests which ascertained achievement levels in items relating to physical fitness, motor ability, and social adjustment. Major conclusions were that (a) the skill-oriented groups at both schools indicated significant improvement in a greater number of test items than did the others; (b) these same two groups indicated a more uniform improvement in motor ability items; (c) the skill-oriented group at one school indicated significantly better performances than the other groups at that school in the pull-ups and volleyball wall volley; and (d) both the skill-oriented and free-play groups at this school were significantly better than the play-oriented group in the basketball wall pass. A major recommendation is that a skill-oriented physical education program, similar to the one developed in this study, be utilized for educable mentally retarded boys.

Gruber, J. J., and A. H. Ismail. Integrated Development, Motor Aptitude and Intellectual Performance. Columbus, Ohio: Charles E. Merrill Books, 1967. ED 016 342. Not available from EDRS.

The relationship of movement responses to learning achievement were investigated (a) to identify factors claimed to measure motor aptitude and intellectual achievement in preadolescents, (b) to develop motor aptitude test batteries for predicting intellectual achievement, (c) to study relationships of coordination and balance test items in predicting intellectual achievement, (d) to study sex differences in motor aptitude test items, and (e) to validate these findings through studying effects of an organized physical education program on intellectual performance. A battery of motor aptitude test items useful in predicting academic success was selected by factor analyses. Other tests used included the Otis Short Form Test of Mental Ability and the Stanford Standard Achievement Tests. Boys (122) and girls (89) were used as subjects. Three subgroups were established for each sex: (a) high achievers (IQ scores 125 and above); (b) medium achievers (IQ scores 95-100); and (c) low achievers (IQ scores 85 and below). Results indicate that coordination and balance items tested have a high degree of discrimination power among medium achievers. Intercorrelations pertaining to levels of intellectual performance indicate coordination and growth items are related to academic achievement. Factor analysis of the 42 items revealed a uniformity of factor structure pertaining to sex, but that these structures lose their uniformity in the three achievement groups. It was concluded that there was a demonstrated relationship between intellectual achievement and certain physical performance items. The relationship was great enough to permit prediction. Thus an organized physical education program was developed to study further its relative effectiveness on IQ and academic achievement scores. The activities included calisthenics, gymnastics, track and field events, games, and rhythmics. The organized program was found to have no effect on IQ scores but did have a favorable effect on academic achievement scores. A 67-item bibliography is included.

Hartog, John F., and Roy Modlinger. "Improvement of Self-Image; Public Law 89-10, Title I--Project 1939N, Evaluation." Freeport, Ill.: Freeport School District No. 145, 26 September 1967. 17 pp. ED 022 812. MF & HC.

This report describes a federally financed project to improve the self-image of disadvantaged pupils living in two institutions for neglected children. After a week of orientation, the children were exposed to 3 weeks of camping environment. Program activities included small-group counseling, independent study, physical education, and experiences in music, drama, and art. Student attitudes and behavior, the program's general effectiveness, and the daily schedule are described.

Henderson, Joe M., and Bert Griffey. "Production of Closed-Circuit Television Programs for Improving Instruction in Professional Health and Physical Education Courses at the Undergraduate Level." Wichita Falls, Tex.: Midwestern University, 30 August 1968. 31 pp. ED 025 953. MF & HC.

To study the adaptability of semiportable closed-circuit television equipment on remote location, six videotape programs were produced at Midwestern University for use in physical education courses. The programs were "Knee-Injuries," and "The A.A.H.P.E.R. Youth Fitness Test." Inexpensive Videcon cameras and one-inch videotape recorders were adequate for programs showing gross motor skills, but programs with more visual detail such as human anatomy required more expensive recording equipment. Technical problems (lighting variables, power supply, camera locations) and production problems (training assistants, production of art work, selection of equipment) influenced recommendations, which were for a television studio with a staff of technicians headed by a professional producer and for further study in the improvement of instruction through closed-circuit television. The portable instant-replay capabilities of the equipment and the resulting flexibility in production and presentation favored these developments.

Herron, Charles E., and others. A Compilation of Adapted Equipment for Physically Handicapped Children: Historical References and Implications for Utilization in Physical Education as a Component of Special Education. University: Charles E. Herron, University of Alabama, June 1969. 79 pp. ED 036 912. Not available from EDRS.

The history of physical education, a philosophy of education, the need for a study of adapted equipment, and a definition of terms are presented. A selected review of the literature and the study methodology precede a list of equipment and apparatus. Drawings of 60 kinds of material are provided, some accompanied by dimensions, composition details, and instructions for assembly. Conclusions are given concerning physical education equipment for the physically handicapped; references are cited.

Hubbard, Alfred W., and Raymond A. Weiss, eds. Completed Research in Health, Physical Education, and Recreation. Vol. 2. Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1960. 84 pp. ED 042 612. MF only.

This document is a compilation of completed research in the areas of health, physical education, recreation, and allied areas for the year 1959 and for a part of the year 1958. The compilation is arranged in three parts. Part 1 is a cross-reference index to all listings in parts 2 and 3. Part 2 is a bibliography of research, covering articles published in 53 periodicals; part 3 cites unpublished master's and doctoral theses for 35 graduate programs in health, physical education, recreation, and allied areas. There is a total of 370 listings in the bibliography and 415 references to the master's and doctoral theses. Abstracts are provided for a majority of the theses.

---. Completed Research in Health, Physical Education, and Recreation, Vol. 4. Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1962. 95 pp. ED 042 613. MF only.

This document is a compilation of completed research in the areas of health, physical education, recreation, and allied areas for the year 1961 and for part of the year 1960. The compilation is arranged in three parts. Part 1 is a cross-reference index to all listings in parts 2 and 3. Part 2 is a bibliography of research, citing articles published in 97 periodicals; part 3 contains listings and abstracts of unpublished master's and doctoral theses for 31 graduate programs in health, physical education, recreation, and allied areas. There is a total of 412 references in the bibliography and 367 listings of master's and doctoral theses.

---. Completed Research in Health, Physical Education, and Recreation including International Sources. Vol. 5. Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1963. 116 pp. ED 042 614. MF only.

This document is a compilation of completed research in the areas of health, physical education, recreation, and allied areas during the year 1962. It is arranged in three parts: an index, bibliography of research published in periodicals, and abstracts and listings of unpublished master's and doctoral theses. The index contains cross references for all listings in parts 2 and 3. Part 2, which is the bibliography of published research, cites articles from 119 periodicals. Part 3 contains the listings of unpublished master's and doctoral theses for 32 graduate programs in health, physical education, recreation, and allied areas. There is a total of 540 references in the bibiography and 362 listings and abstracts to master's and doctoral theses.

---. Completed Research in Health, Physical Education, and Recreation including International Sources. Vol. 6. Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1964. 124 pp. ED 042 615. MF only.

This document is a compilation of completed research in the areas of health, physical education, recreation, and allied areas for the year 1963. It is arranged in three parts. Part 1 is a cross-reference index to all the listings in parts 2 and 3. Part 2 is a bibliography of research published in periodicals. Part 3 cites unpublished master's and doctoral theses for 38 graduate programs in health, physical education, and allied areas. There is a total of 558 listings from the journals and 390 references to master's and doctoral theses. Abstracts are provided for a majority of the theses.

---. Completed Research in Health, Physical Education, and Recreation including International Sources. Vol. 7. Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1965. 130 pp. ED 042 61[illegible] only.

This document is a compilation of completed research in the areas of health, physical education, recreation, and allied areas for the year 1964. It is arranged in three parts. Part 1 is a cross-reference index to all of the listings in parts 2 and 3. Part 2 is a bibliography of research published in periodicals. Part 3 cites unpublished master's and doctoral theses for 38 graduate programs in health, physical education, recreation, and allied areas. There is a total of 491 bibliographical references to the journals and 466 references to master's and doctoral theses. Abstracts are provided for a majority of the theses.

---. Completed Research in Health, Physical Education, and Recreation including International Sources. Vol. 8. Washington, D.C.: American Association for Health, Physical Education, and Recreation. 1966. 140 pp. ED 042 617. MF only.

This document is a compilation of completed research in the areas of health, physical education, recreation, and allied areas for the year 1965. It is arranged in three parts. Part 1 consists of a cross-reference index to all of the listings in parts 2 and 3. Part 2 is a bibliography of research published in periodicals. Part 3 cites unpublished master's and doctoral theses for 48 institutions offering graduate programs in health, physical education, recreation, and allied areas. There is a total of 430 bibliographical references to the journals and 545 references to master's and doctoral theses. Abstracts are provided for a majority of the theses.

---. Completed Research in Health, Physical Education, and Recreation including International Sources. Vol. 9. Washington, D.C.:

American Association for Health, Physical Education, and Recreation, 1967. 154 pp. ED 042 618. MF only.

This document is a compilation of completed research in the areas of health, physical education, recreation, and allied areas for the year 1966. It is arranged in three parts: an index, a bibliography of research published in periodicals, and listings and abstracts of unpublished master's and doctoral theses. The index contains cross references for all listings in the bibliography and unpublished theses. The bibliography contains references to research published in 113 periodicals. The third section contains listings and abstracts of master's and doctoral theses for 54 institutions offering graduate programs in health, physical education, recreation, and allied areas. There is a total of 560 references in the bibliography and 631 listings and abstracts to doctoral and master's theses.

---. Completed Research in Health, Physical Education, and Recreation. Vol. 10. Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1968. 152 pp. ED 042 619. MF only.

This document is a compilation of theses completed in the areas of health, physical education, recreation, and allied areas for the year 1967. It is divided into two parts: an index and theses abstracts. The index contains cross references to the theses abstracts, which represent unpublished master's and doctoral theses for 60 institutions offering graduate programs in health, physical education, recreation, and allied areas. There is a total of 749 listings and abstracts to master's and doctoral theses.

International Council on Health, Physical Education, and Recreation. Teacher Training for Physical Education. ICHPER Questionnaire Report, pt. 2. Washington, D.C.: National Education Association, 1968. 131 pp. ED 030 583. MF only.

This survey report of teacher training practices in physical education around the world presents the results of both a 1963 study and a 1968 revision. Material obtained in 1963 (from 51 countries, 25 of them submitting information for the first time) is in italic print. An introductory section summarizes the total report. Part 1 contains information supplied by questionnaire respondents in each of 80 countries on six major points: (a) physical education training institutions; (b) certificate or degree and years of study required; (c) facilities and research and library resources; (d) physical education teacher training curriculum; (e) professional training; and (f) changes, development, and progress in the physical education teacher training program. Part 2 is composed of charts compiled from the information contained in the 80 sections of part 1: (a) availability of resources for training programs; (b) physical activities in the teacher training curriculum; (c) professional courses in the programs; (d) length of time required to become a physical

education teacher as compared to that for teachers of other subjects; and (e) recent change, developments, and trends. A list of respondents (addresses of individuals) and a copy of the questionnaire are appended.

Jensen, Judith. "Developing a Model for an Academic Major in Physical Education." Final Report. Brockport: State University of New York, Brockport College, July 1970. 29 pp. ED 051 785. MF & HC.

This report aims to provide a detailed description of the development of both the concept and content of an innovative undergraduate major in physical education established at the State University College at Brockport. The new approach views physical education as "the study of the significance for man of experiences in certain forms of human movement." In the course of developing the curriculum, literature was reviewed, experts were consulted, curricula of other institutions were studied, and a workshop was sponsored. These efforts resulted in a physical education major that divides the study of movement experiences into five basic areas: biological, sociocultural, philosophical, psychological, and performance. The report outlines the components of the curriculum and includes a bibliography. Appendices cover the teacher preparation program, a conceptual curriculum in physical education, excerpts from discussions at the workshop, and course descriptions.

Johnson, Barry L., and Jack K. Nelson. Practical Measurements for Evaluation in Physical Education. Minneapolis, Minn.: Burgess Publishing Co., 1969. 486 pp. ED 048 380. Not available from EDRS.

Developed in response to the need for a better understanding of how to measure and evaluate physical skill performance in an economical and practical manner, this book provides data that should augment the physical educator's evaluation skills. The objectives were to develop within the prospective physical education teacher a greater understanding and appreciation of the need for the application of tests and measurements in the evaluation process (some basic statistical techniques are discussed); to offer several tests in each of 15 subject areas that can be used by the average physical education teacher in a typical school situation; to discuss the various qualities and present brief summaries of pertinent research findings; and to identify problems that arise in isolating and measuring particular abilities. The tests included were selected from those already published or were developed and modified by the authors. Extensive bibliographies support each of the 22 chapters, and normative data for the measurement of particular physical abilities is provided.

Jones, Thomas E. "How to Build a Track." Madison: University of Wisconsin, 1955. 86 pp. ED 035 161. MF & HC.

Information on various aspects of track construction is provided, divided into the following areas: (a) general requirements for a standard track; (b) selection of a site; (c) construction of the body of the track; (d) track measurements and markers; (e) specifications for construction of takeoffs, runways, circles, and field areas; (f) care of the track; (g) minimum requirements for high school tracks; (h) construction and care of indoor tracks; and (i) preparation for conducting a track meet. Diagrams and specifications of some of the best tracks in the world are included.

Kershner, John R. "An Investigation of the Doman-Delacato Theory of Neuropsychology as It Applies to Trainable Mentally Retarded Children in Public Schools." Harrisburg, Pa.: State Department of Public Instruction, May 1967. 117 pp. ED 015 604. MF & HC.

This study used two intact classes of public school trainable mentally retarded children to study the effects of physical activities derived from the Doman-Delacato theory of physical and intellectual development. The experimental group consisted of seven males and six females from age 8 to 18; the control group consisted of ten males and six females from age 8 to 17. All subjects were given the following pre- and post-tests: (a) a mobility scale derived from the Doman-Delacato Developmental Profile, (b) the Kershner-Dusewicz-Kershner revision of the Vineland adaption of the Oseretsky Tests of Motor Proficiency, and (c) the Peabody Picture Vocabulary Test. The experimental program was extended through 74 teaching days that approximated five and one-half hours each and included activities consistent with the Doman-Delacato theory. For the control group, the curriculum involved a number of nonspecific activities that could give opportunities for praise and attention equal to that received by the experimental group. Hypothesis one, stating there is a significant improvement in creeping and crawling performance favoring the experimental group, was accepted on the basis of a Mann-Whitney U test comparison. Hypothesis two, stating there is a significant improvement in perceptual-motor proficiency favoring the experimental group, was rejected. Hypothesis three, stating there is a significant mean IQ improvement favoring the experimental group, was accepted. The treatment had a facilitating effect on both the physical and intellectual development of the experimental group. Replication and larger scale investigations are needed. Appendices include the creeping and crawling scale and the Kershner-Dusewicz-Kershner revision of the Vineland/Oseretsky Tests of Motor Development. A bibliography lists 56 items.

Ledermann, Alfred, and Alfred Trachsel. Creative Playgrounds and Recreation Centers. Rev. ed. New York: Frederick A. Praeger, 1968. 176 pp. Not available from EDRS.

This comprehensive guidebook (written in both English and German) pertains to various aspects of planning and designing playgrounds and

community centers. The introductory chapter discusses the educational and formative aspects of playgrounds, city planning prerequisites, and the effects of sociological conditions before initial planning is begun. The main body treats traditional children's playgrounds, grouping them according to type, and leisure centers for young and old. Many of the latest examples are included, particularly those from the U.S. Special projects such as therapeutic playgrounds for children's hospitals are illustrated, as well as experimental school yards. A section is also included on playground equipment, with special emphasis given to structures that stimulate the creative imagination of the child. Photographs and diagrams are presented throughout.

London Department of Education and Science. Playing Fields and Hard Surface Areas. New York: British Information Services; London: Her Majesty's Stationery Office, 1966. 89 pp. ED 035 239. Not available from EDRS.

Guidelines are presented regarding the planning, layout, construction, and maintenance of outdoor playing fields for physical education. Consideration is given to the dual use of playing fields by the school and the community, the planning of hard surface playing areas, specifications of quantities, and bills. Maintenance costs of grass playing fields, specifications for playing fields and other games provisions, and seed mixtures and seed-turf analyses are set forth in the appendices. Diagrams are included throughout.

Lundstrom, Donald, and others. Environment--A Way of Teaching (Grades K-12). Hayward, Calif.: Alameda County School Department, Curriculum Library, 1971. 99 pp. Available from the Library. ED 063 989. MF & HC.

Resource information and ideas for curriculum programs related to the study of the environment are presented in this resource guide for elementary and secondary teachers. Activities in the outdoors and action programs representative of recent district and country activities in Alameda County, California are discussed. A list of resources, agencies, organizations, and programs and a bibliography of library materials are also provided. The appendices include the California state education code and federal and state laws and regulations pertaining to the environment.

Massachusetts School Building Assistance Commission. "Physical Education, Secondary Schools Facilities and Basic Equipment 1966." Boston: the Commission, 1966. 19 pp. ED 021 397. MF & HC.

Junior and senior high school gymnasiums should be located away from classrooms and near outdoor play areas. Junior high school gymnasiums should be a minimum of 84' x 98' x 22'. Senior high gymnasiums should

be at least 90' x 106' x 24'. Areas should be divisible. Provision should be made for basketball, volleyball, badminton, paddle tennis, seating, and teaching areas. Other indoor areas recommended are space for gymnastics, remedial work, health, and wrestling, and a simulated outdoor area. Special attention should be given to the floor, walls, ceiling, partitions, lighting, locker, shower, drying, towels, team, training and storage rooms, and offices. Outdoor facilities should provide 20 acres plus an additional acre per 100 pupils for junior high pupils; senior high pubils should have a site of 30 acres plus one acre per 100 pupils. Hardtop areas, tennis courts, and grassy areas should be included. Provisions should be made for interscholastic sports. Outdoor and indoor equipment lists as well as a bibliography are provided.

Mayshark, Cyrus, and Thomas W. Evaul. Programed Instruction in Health Education and Physical Education. Washington, D.C.: American Association for Health, Physical Education and Recreation, 1970. 92 pp. ED 040 958. MF only.

This book contains eight chapters by several different authors, most of them professors of health or physical education. Focus is on applications and implications of programed instruction for professionals in the health and physical education fields. "Overview of Programed Instruction" defines programing, its development and implications for learning theory, and compares linear and branch programing. Chapter 2, "Theory and Designs of Programs," is itself programed to illustrate both kinds of programing as well as behavioral objectives and self-examination. "The Case for Programing" discusses uses of programed instruction, advantages and disadvantages, teacher role, and programed movement instruction (PMI). Chapter 4 deals with the format and hardware of programed instruction; chapter 5, with pioneering programing efforts in health and physical education. Chapter 6, "Other Uses of Programing Theory," suggests application of the objectives, evaluation, and feedback of results to other forms of instruction. "The Challenge of Programing to Teachers" lists specific steps to follow in writing a program. The final chapter is a summary focusing on implications of programed instruction for future research, students, and teachers. Authors are Mildred Barnes, Loren Bensley, Robert Clayton, Thomas Evaul, A. Bruce Frederick, Cyrus Mayshark, Einar A. Olsen, and Mary Ost.

Metheny, Eleanor. "The Creative Process in Sports and Dance." Speech delivered at fall conference proceedings of the Central District Association for Physical Education of College Women, Estes Park, Colorado, 4-5 October 1968. 61 pp. ED 035 496. MF & HC.

An examination was made into the problems of development of creative reasoning. Historical comments regarding the probable development of creative thought are amplified by glimpses into the lives of several mythical prehistoric characters. Contemporary classroom techniques

designed to stimulate creative thought are presented for use in the areas of dance, sports, and physical education. The student is encouraged to verbalize these thoughts and the feelings experienced while searching for meaning during the creative process. Examples of several student responses to the techniques demonstrate their effectiveness.

Miller, John E. "A Facilities Utilization Analysis Program for Educational Institutions." Paper presented at the fifth annual meeting of the Association for Educational Data Systems, Detroit, 1-4 May 1967. 18 pp. ED 023 274. MF & HC.

Possible procedures and statistical analyses that may be employed in carrying out utilization studies are suggested. All types of facilities are grouped into two categories, instructional and non-instructional. Inventory, analysis, and planning are suggested as phases for a facilities utilization study. Facilities survey forms are included for classrooms and teaching laboratories, armories, field houses, gymnasiums, assembly halls, auditoriums, and theaters; summary forms are also given.

Mount San Jacinto College. Another Step toward Accountability. Measurable Institutional Objectives 1972-73: Objectives and Achievements. Gilman Hot Springs, Calif.: the College, 10 October 1972. 95 pp. ED 069 269. Not available from EDRS.

Both measurable and unmeasurable institutional objectives of Mount San Jacinto College for the year 1972-73 are provided in this report. The currently unmeasurable objectives, section 1 of the report, are presented in a two-column format: (a) currently unmeasurable objectives and (b) how the students will be helped to achieve these objectives. Section 2 of the report is measurable objectives for general education, which shows in tabular format courses offered, percent of students who persisted, grade point average, units enrolled, and units achieved for 1971-72; it also provides the same kind of statistics for the predicted goal for 1972-73. Sections 3 and 4 present unmeasurable and measurable objectives for general education and occupational education. Section 5 concerns the developmental program (reading development and basic skills in English). Unmeasurable and measurable objectives for physical education, unmeasurable objectives for community services, and unmeasurable and measurable objectives for student personnel are provided in sections 6 through 10. Section 11 concerns increasing the effectiveness of instructions; section 12 is the superintendent's recommendation to the trustees; and section 13 is the general output for college. An appendix presents measurable and currently unmeasurable course objectives as samples of descriptions of what students learn in order to earn "units." Its four sections are principles of sociology, basic psychology for managers, elementary typewriting, and elementary and intermediate shorthand.

Muller, Robert M. "Adaptive Physical Education." Cornwells Heights, Pa.: Bensalam Township School District, November 1970. 46 pp. ED 051 216. MF & HC.

Grades or ages: Elementary grades. Subject matter: Adaptive Physical Education. Organization and physical appearance: The aims and objectives of the program and the screening procedure are described. Common postural deviations are identified and a number of congenital and other defects described. Details of the modified program are given. There is a glossary of terms and samples of letters to physicians and parents in connection with the program. The guide is mimeographed and spiral bound with a soft cover. Objectives and activities: The objectives are briefly outlined at the beginning of the guide. Specific exercises and activities are listed for the various physical deviations. Instructional materials: There is no information on materials. Student assessment: No provision is made for evaluation.

Musial, Stan. Facilities for Physical Fitness. New York: Buttenheim Publishing Corp., 1965. ED 018 932. Not available from EDRS.

This article cites the low priority that physical education generally has in curriculum and school facility planning. It also cites the reasons for developing more adequate physical education facilities: (a) our way of life no longer provides vigorous physical activity necessary for healthy development; (b) a direct relationship exists between physical fitness and academic and social performance; and (c) increased leisure time requires that people be prepared to use it enjoyably and constructively. The article includes recommendations for facilities for a high school physical education program--boys and girls gymnasiums with apparatus and exercise rooms, a swimming pool, playing fields, courts and hard surface areas, an outdoor recreation area, an obstacle course, athletic facilities for well-rounded intramural and varsity programs, and adequate locker and shower facilities. Cited as an example is the space and facilities requirements for a physical education program set up by the State Department of Education of California. Physical education facilities should be used during evenings, on weekends, and during the summer months. The article recommends that physical education facilities be planned for instruction, school recreation, and community use.

Nagel, Charles, and Fredricka Moore. Skill Development through Games and Rhythmic Activities. Palo Alto, Calif.: National Press, 1966. ED 019 996. Not available from EDRS.

A discussion of the overall objectives of physical activities in the elementary school, the purposes of developing movement skills in games and rhythms, and the role of the teacher in physical education comprises the introductory chapter of this textbook for beginning physical education teachers. Succeeding chapters are concerned with

five subjects. "Planning the Program" is a description of methods in class organization, formations for skill practice and relays, sample lesson plans, and evaluation techniques. "Fundamental Ball Skills and Related Games" illustrates how skills enable children to play games effectively. "Fundamental Rhythm Skills and Related Activities" offers a visual, descriptive, and rhythmic analysis of the basic skills of motion. "Ball Skills and Related Team Games" is a discussion of advanced ball skills used in basketball, soccer, football, volleyball, and softball. "Dance Skills for Folk and Social Dance" presents techniques for teaching traditional and current folk dances to help children enjoy participation in this kind of rhythmic activity. Drawings and diagrams illustrate playing positions and form in each chapter. Book and record references are also included.

National Center for School and College Television. "Television in Health and Physical Education." National Center for School and College Television News Supplement No. 4. Bloomington, Ind.: the Center, n.d. 10 pp. ED 014 885. MF & HC.

This report concerns the National Center for School and College Television's conference on television in health and physical education. The conference was conducted to assess television materials now offered in health and physical education in an effort to stimulate the development of increasingly effective television materials. The report has three sections: (a) a status report of health and physical education telecourses offered in the U.S.; (b) a summary of the discussion among the health, physical education, and television authorities participating in the conference; and (c) a tabular breakdown of the information gathered for the conference.

National Education Association. "A Selected Bibliography for Programing Physical Education and Recreational Activities for the Mentally Retarded." Washington, D.C.: the Association [1966]. 19 pp. ED 011 426. HC & MF.

Containing 93 annotated references to books, pamphlets, and journal articles from 1937 through 1966, this bibliography is designed for teachers, recreation personnel, parents, and counselors. Listings include a section of references on recreational activities and physical education for the mentally handicapped, as well as a section on the general subjects of mental retardation, physical education, and recreation.

National Film Board of Canada. 16mm Films Available for Purchase and Rental in the United States, 1970-71. New York: the Board, 1970. 72 pp. ED 043 229. Not available from EDRS.

Sixteen-millimeter educational films are listed in this catalog with

description and running time. They are listed under 24 subject headings grouped into six categories: the arts; people, places, and history; health; science; social science; and sports and recreation. Cross references are provided throughout. Purchase and rental information is given in the index. Brief information is also given on availability of filmstrips and 8mm film loops.

Neilson, Donald W., and John E. Nixon. Swimming Pools for Schools. Monograph no. 3. Stanford, Calif.: Stanford University Press, 1954. 51 pp. ED 028 588. Not available from EDRS.

The increasing interest in swimming instruction and recreation for elementary and secondary school children has resulted in the development of this guide for swimming pool use, design, and construction. Introductory material discusses the need for swimming in the educational program and the organization of swimming programs in the school. Design specifications include (a) pool location, (b) indoor-outdoor pools, (c) pool shape and dimensions, (d) pool details and equipment, (e) supporting equipment and facilities, and (f) care of swimming pools. The discussion stresses comparison of alternative solutions and health and safety considerations. Photographs and diagrams supplement text material. An extensive bibliography on swimming instruction and pools is included.

Neufeld, K. Allen, ed. Individualized Curriculum and Instruction. Proceedings of Invitational Conference on Elementary Education, Banff, Alberta, 29 October-1 November 1969. Edmonton: University of Alberta, Department of Elementary Education, Conference on Elementary Education, 1970. 220 pp. Available from the Department. ED 046 122. MF & HC.

This collection of conference papers by various authors covers the following aspects of individualized curriculum and instruction: research trends, applicability to specific subject areas, and implications for teacher education.

New Jersey State Department of Education. "A Guide for Planning Physical Education and Athletic Facilities." Trenton: the Department, 1964. 48 pp. ED 014 845. MF & HC.

This study examines physical education facilities, their physical needs, and related design considerations. A system for determining the total number of teaching stations needed is given to aid initial requirement analysis. Indoor facilities analyzed include (a) the gymnasium, in terms of location, size, design features, and related components; (b) auxiliary teaching rooms, which provide teaching stations for specialized functions; (c) locker and shower rooms, including supporting facilities and details; and (d) offices for supervisory functions. Planning factors for outdoor facilities

include location, supervisory control, safety, utility, surfacing requirements, and specialized equipment. Requirements for interscholastic athletics and recreational facilities are listed in terms of storage and usage requirements, while important general factors for field house and athletic field design are given. A checklist for facilities planning is included to help eliminate common errors made in design and construction.

New Jersey State School of Conservation. "Suggested Bibliography for Outdoor Education and Camping." Branchville: the School, January 1967. 5 pp. ED 035 492. MF & HC.

Seventy-seven books and articles published between 1939 and 1964 are listed in this bibliography for students and teachers of outdoor education. The entries are listed alphabetically under the following subject headings: Outdoor Education, Conservation, Administration, Aquatics, Archery, Arts and Crafts, Indian Lore, Nature Study, Riding, Rifle, and Therapeutic Camping.

New York State Education Department, Bureau of Elementary Curriculum Development and Bureau of School Libraries. "Selected Teaching Materials in Physical Education for Elementary School Pupils." Albany: the Department, 1970. 24 pp. ED 043 056. MF & HC.

This bibliography was compiled to assist educators in their selection of reading materials in physical education for elementary pupils. Besides general and reference works, specific topics include games, the Olympic games, aquatics, individual and dual activities, team activities, rhythms and dance, the great outdoors, and winter sports. A listing of periodicals, sources of free material, and a directory of publishers are included.

Pelikan, Alfred, and others. "Instructional Television for the Fifth Grade. A Teacher Guide, Semester II." Milwaukee, Wis.: Milwaukee Public Schools, 1962. 142 pp. ED 001 363. MF & HC.

Instructional television for fifth grade is divided into five areas--art, foreign language, music, physical education, and science. A calendar is given to correlate dates and subject matter. A preview of the content of each lesson is made available, and follow-up activities are suggested to reinforce the learning. The structure of the art lessons includes the fundamental principles applicable to line drawings, picture making, design, and construction. It is urged that pupils participate only after viewing the lesson. Art lessons include a relief carving, string print, potato cube print, and divided space panels. The Spanish lessons introduce some new conversational patterns and include a systematic review of previously learned conversational patterns. The teacher is encouraged to prepare the pupils for the telecast by telling them what type of lesson will

be presented. Pronunciation sheets and grammar explanations for teacher use are included. Twenty-four lessons, based on familiar everyday experiences, are developed by using the conversational pattern technique. The purpose of the music program is to acquaint young people with the different instruments of the orchestra by explaining the instruments by family- strings, brass, woodwinds, and percussions. Pupils should be encouraged to listen to broadcasts and telecasts of symphony orchestras, to attend concerts, to make music notebooks, and to build a vocabulary list of musical terms. Physical education telecasts are devoted to developing skills in stunts and tumbling, softball, and balance for physical fitness. Instructions are given for both the activity and the theory behind it. The science program stresses the biographical approach to science by demonstrating techniques of great astronomers such as Copernicus, Herschel, and Galileo. Simplified constructions for portraying our solar system are included in the science instruction.

---. "Instructional Television for the Fourth Grade. A Teacher Guide, Semester II." Milwaukee, Wis.: Milwaukee Public Schools, 1962. 68 pp. ED 001 399. MF & HC.

Programs for fourth grade are divided into four areas--art, music, physical education, and science. Art lessons include the paper construction of rockets and spaceships, finger puppets, sandpaper prints, and glass additive prints. Each lesson is complete with purposes, process and medium, subject, materials, proposed sequence, and additional activities. Teachers are advised to anticipate needed materials since pupil participation should be undertaken as soon as possible after the telecasts. The general purpose of the music program is to acquaint students with the appearance, sound, and tone quality of the instruments of an orchestra, such as the bassoon, contra-bassoon, viola, cello, and bass viola. To make lessons meaningful, pupils should be encouraged to listen to broadcasts featuring orchestras and bands, attend concerts, make music notebooks, and build a vocabulary of musical terms. Physical education activities for this group include balance, cartwheels, four square skills, and softball skills. Students should participate in the activities soon after the telecasts. Science telecasts are designed to bring to teachers and pupils certain experiences which might not ordinarily be possible in the classroom. For some classes, the telecasts might provide enrichment; for others, an introduction to or motivation for a particular area of study. Units include simple machines, rocks and minerals, birds, and plants. Activities correlated with each unit are suggested, together with vocabulary to be developed.

---. "Instructional Television for the Lower Primary. A Teacher Guide, Semester II." Milwaukee, Wis.: Milwaukee Public Schools, 1962. 41 pp. ED 001 395. MF & HC.

Programs for the lower primary group are in art, music, and physical

education. A preview of the content of each telecast is given with detailed information for follow-up activities. The structure of the art program includes the fundamental principles applicable to such basic areas as line drawing, picture making, design, and construction, with the main objective of encouraging individual expression. Participation in art activities is to take place as soon as possible after viewing the telecasts. Lessons for this group include hand manipulations with mosaic, blot design, soap fluff, and spring fun. The musical program is designed to develop active listening rather than passive hearing by acquainting the pupils with the appearance and sound of instruments of the orchestra and band. Teachers are advised to become personally acquainted with the recordings to be presented before the telecast. They are to replay the selections for the pupils after the telecast to increase familiarity with the music as to mood, instrumentation, rhythm, melody, and form. Physical education units include stunts and tumbling fun, balance beam safety, circus fun, and outdoor games. Suggestions are given for correlating the circus unit with lessons in language arts, reading, numbers, social studies, sciences, art, and music.

---. "Instructional Television for the Middle Primary. A Teacher Guide, Semester II." Milwaukee, Wis.: Milwaukee Public Schools, 1962. 43 pp. ED 001 334. MF & HC.

Instructional television programs for the middle primary grades are divided into three areas--art, music, and physical education. The main objective of the art program is to encourage individual creativity. Pupil participation is to take place as soon as possible after telecast viewing. Art lessons use a winter theme, stuffed paper forms, sponge paintings, and spring murals. Each lesson includes a statement of purpose, materials to be used, the proposed sequence, and additional activities. The music program is designed to increase children's enjoyment of music by pointing out specific things to listen for, thereby developing active listening rather than passive hearing, and to acquaint children with the appearance and sound of instruments of the orchestra and band. Teachers are advised to become personally acquainted with the music to be used on the telecasts before the actual program and to replay them to the children after the telecasts to increase familiarity with the music with respect to mood, instrumentation, rhythm, melody, and form. Physical education lessons are designed to present new activities, to show the correct techniques of various skills, and to guide pupils in the development of desirable habits and attitudes. Active participation of the students as soon as possible after the telecast is recommended. Activities for this group include stunts and tumbling fun, balance beam safety, hopping and jumping skills, and circus activities. Suggestions are given to correlate a circus theme with other subjects in primary school such as language arts, reading, numbers, social studies, science, art, and music.

---. "Instructional Television for the Sixth Grade. A Teacher Guide,

Semester II." Milwaukee, Wis.: Milwaukee Public Schools, 1962. 149 pp. ED 001 355. MF & HC.

Five areas are presented--art, foreign language, music, physical education, and science. A calendar is given for correlation purposes. The art program emphasizes individual creativity and includes lessons on relief carving, string print, potato cube print, and divided space panels. Pupil participation should occur only after telecast viewing. Spanish lessons include a systematic review of previously learned conversational patterns with an introduction of some new conversational patterns. Lessons are based on familiar everyday expressions. Teachers are encouraged to prepare the pupils for the telecast by explaining to them what type of lesson will be presented. Pronunciation sheets and grammar explanations for the teacher are included. Techniques for correlating Spanish with art, music, social studies, and physical education are considered. To encourage letter writing, a list of pen pal agencies is offered. The music program is designed to acquaint students with woodwind, brass, string, and percussion instruments. The physical education program is concerned with developing skills in basketball, balancing, softball, and rope jumping. Instructions are given for both activity and theory. A biographical approach is stressed for the science telecasts. Units include work on chemistry and air; a list of scientists in these areas is suggested for possible study. A vocabulary to be developed with each lesson is also given.

---. "Instructional Television for the Upper Primary. A Teacher Guide, Semester II." Milwaukee, Wis.: Milwaukee Public Schools, 1962. 57 pp. ED 001 329. MF & HC.

Telecast programs for the upper primary grades are in art, music, physical education, and science. A preview of the content of each unit is given, together with detailed information for follow-up activity. In the art series, it is recommended that pupil participation take place as soon as possible after the telecast. Individual creativity is emphasized. Lessons include a winter theme, stuffed paper forms, sponge painting, and a spring mural. Music lessons are designed to acquaint the pupils with the appearance and sound of instruments such as the violin, cello, trumpet, flute, and drums, with emphasis on active listening rather than passive hearing. Teachers are advised to become acquainted with selections before the presentation and to replay them to pupils after the telecast to increase familiarity with music with respect to mood, instrumentation, rhythm, melody, and form. Pupils should be given the opportunity to listen quietly to an uninterrupted performance of music. Physical education telecasts are designed to present new activities, show correct techniques of various skills, and guide pupils in the development of desirable habits and attitudes. Stunts and tumbling, rope jumping, outdoor games, and circus time are included. Circus theme activities are correlated with other subjects in the primary grade such as language arts, reading, numbers, social studies, science, art, and music. Science telecasts are designed to bring science experiences into the

classroom which might not ordinarily be possible. Units in this series are plants, animals, earth, universe, and energy. For some classes, the telecasts provide enrichment; for others, an introduction to the particular area.

Petersen, Alexander, Jr. "A Guide for Planning the Field House as a College or School Physical Education Facility." New York: Columbia University, Institute of Field Studies, 1963. 62 pp. ED 031 911. MF & HC.

The planning of field houses for schools and colleges is discussed in relation to their various uses, such as physical education programs, intramural and extramural athletics, and intercollegiate athletics. Following a presentation of the historical development of field houses and their educational significance, designing the field house is considered; focus is on the equipment and facilities to be included in the structure. The operating and servicing of field houses are also considered.

Pittsburgh Public Schools, Office of Research. "Adapted Physical Education Program. 1968 Report." Pittsburgh, Pa.: the Office, 1968. 22 pp. ED 026 781. MF & HC.

A program was introduced in 1965 to provide individualized physical education for students in grades 1 through 12 who could not participate in regular physical education programs. Twenty-one schools and 1,640 students with a variety of conditions participated. The most frequent limitations of participants were low physical fitness, overweight, and curvature of the spine. Pupils attended an average of two 45-minute classes a week where they engaged in regular physical education activities adapted to their specific needs. Measurement of program effectiveness revealed that although the number of schools having the program increased, the number of students served decreased; there was no difference in improvement of students with low physical fitness related to whether they had one, two, or five classes per week. Instructors estimated that 30 percent of participants reached maximum improvement, 44 percent showed moderate improvement, 17 percent minimal improvement, and 9 percent no improvement. Of the students, 16 percent were returned to regular physical education classes. Administrative considerations are included.

Rarick, G. Lawrence, and Geoffrey A. Broadhead. "The Effects of Individualized versus Group Oriented Physical Education Programs on Selected Parameters of Development of Educable Mentally Retarded and Minimally Brain Injured Children." Final Report. Madison: University of Wisconsin, Department of Physical Education, 31 August 1968. 205 pp. ED 025 892. MF & HC.

This investigation examined the role of physical activity programs in

the modification of the motor, intellectual, social, and emotional development of educable mentally retarded children and minimally brain injured children. Forty-nine classes of children (275 educable mentally retarded and 206 minimally brain injured) participated in 20 weeks of instructional programs. Classes were randomly assigned to one of four treatments: two were physical education programs (one individually oriented, the other group oriented); a third was an art program (Hawthorne effect); and a fourth, a control (usual program). A battery of 32 tests was administered prior to and at the end of the experiment. Children in the special experimental programs elicited greater positive changes in their motor, intellectual, and emotional behavior than those in the control program. Of the special programs, the physical education programs were superior in modifying motor performance, the art program in altering emotional behavior; neither was superior in modifying intellectual behavior. The individually oriented physical education program elicited greater gains than the group-oriented program in measures of motor, intellectual, and emotional behavior. Positive behavior changes occurred more frequently in the older than younger, more often in the brain injured than retarded, and more frequently in the boys than girls.

Robertson, Nan. Air Structures for School Sports. New York: Educational Facilities Laboratories, May 1964. ED 018 924. Not available from EDRS.

Air structures are fabric buildings blown up and held up by air pressure. Experiments with such structures were conducted as early as 1917. In 1943 the air force sought a new way of housing large radar antennae planned for the Arctic. As an outcome of their search, Birdair Structures, which is now one of several companies selling such structures, was founded. Early experiences with air structures for schools in Litchfield, Connecticut were disappointing. The subsequent erection of two more bubbles was evidence that satisfaction was eventually achieved. Cost estimates of $2.12 per square foot compare favorably with wood-domed fieldhouses at $6.53 per square foot or geodesic fieldhouses at $8.34 per square foot. Costs for swimming pool use are estimated at $9.38 per square foot as compared to $26.00 and $32.00. Ease of heating is also emphasized. Installation time is approximately one day. There is no danger of suffocation in case of deflation because the process is slow and the material can easily be lifted should one find it necessary to get out under such conditions. There is no fire danger. Because of a high reflection surface, lighting problems are minimal. Current experiments are being carried out to make improvements. Interested readers may see suggested Do's and Don'ts by referring to this booklet. Advantages of air structures are cost, heating ease, lighting ease, unobstructed area, portability, maintenance, and dependability. The main disadvantage is the limited life expectancy.

Ross, Sheila A. "A Study of the Effects of an Intensive Training Program on the Motor Skills of Young Educable Mentally Retarded Children." Final Report. Palo Alto, Calif.: Palo Alto Medical Research

Foundation, November 1967. 53 pp. ED 023 242. MF & HC.

In a study on improvement of basic motor skills by educable mentally retarded (EMR) children with special training in a sport and game situation, 21 EMR boys and 19 EMR girls (ages 4-1 to 10-1) were divided into an experimental and a control group. Ss were matched by chronological age, IQ, sex, and pretest scores on the Basic Skills Test (reliability .97) and on eight items of the Brace Test (a test of general motor skills). An average group (9 boys and 11 girls, 4-10 to 9-7, IQ range 90 to 110) also served as a control. The experimental group received 20- to 25-minute training three times a week for 6 months on the following skills: hitting, catching, throwing, running, jumping, bouncing, kicking, hopping, skipping, balancing, and target throwing. The two control groups remained in the regular physical education programs for EMR and average children. On the two tests, the EMR groups did not differ significantly on pretest scores, but both differed significantly ($P=.001$) from the average control group. Upon posttesting, the two EMR groups did not differ on the brace test; the EMR experimental group differed significantly ($P<.001$) from the control group on the Basic Skills Test; and the average group did not differ significantly from the experimental group.

Safrit, Margaret J. "The Structure of Gross Motor Skill Patterns." Madison: University of Wisconsin, 1966. 165 pp. ED 010 102. MF & HC.

This effort involved an examination of basic, gross motor skills in a variety of sports activities through factor analytic techniques. Three alternate sets of movement factor patterns were hypothesized on the basis of a logical "opinion" analysis. Pattern "A" represented an obvious "opinion" classification of the variable by extremities used in projection. Pattern "B" involved a more complicated classification of skills, including overarm, sidearm, underarm, pushing, and striking movements. Pattern "C" was based in part on two types of projection--striking and releasing. The data were gathered over a 3-month period. Subjects were approximately 170 junior and senior high school female students. They were tested on 25 variables, all of which were measures of all-out performance. Examination of the results indicated that the original, hypothesized sets were an inadequate representation of the skills in question. The actual factor patterns were almost totally unlike the hypothesized factor patterns.

San Diego State College. "Anthropometric Training Project." Final Report. San Diego, Calif.: the College, 30 September 1967. 12 pp. ED 021 291. MF & HC.

The anthropometric training project is aimed at providing a training program for select students to develop research competency in an area relating body type, composition, anthropometric assessment, and physical performance measures. The program involves interdisciplinary cooperation in training through seminars, laboratory practice, and independent small-group projects. Major content areas and approximate sequence of instructions include (a) anthropometric research metho-

dology, (b) resolution of data, (c) physique and body type, (d) body composition, (e) anthropometric procedures and practice, and (f) selected performance parameters. A thorough evaluation of the program is included. The conclusion is that the program did develop research competency in an area relating physical performance to anthropometry.

Schneider, Elsa, ed. Physical Education in Small Schools, with Suggestions Relating to Health and Recreation. Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1960. 163 pp. ED 023 530. Not available from EDRS.

A joint committee from the American Association for Health, Physical Education, and Recreation and the Department of Rural Education, National Education Association developed this handbook for physical education for rural youth. General needs of children in relation to physical fitness and social development are discussed. The major portion of the document consists of games and activities that may be used for primary, middle, and upper grades. Suggestions offered have direct implications for expanded programs of health and recreation. A bibliography of general publications and those with special emphasis on games and rhythm programs is included.

Schrock, Robert W. "A Clearinghouse for Creativity." Ohio School Boards Association Journal, 12, no. 2 (February 1968). 5 pp. ED 020 037. MF & HC.

In an attempt to stimulate creativity and innovation among teachers, a six-county educational service center has been established in New Philadelphia, Ohio, serving more than 50,000 students and 2,500 teachers. With a professional staff of eight and a wide variety of audiovisual devices, the center is prepared to assist any teacher within the participating counties in the development and evaluation of innovative techniques in teaching. A wide selection of motion picture titles is maintained in addition to a complete data processing facility to which any teacher may subscribe. A number of workshops has been conducted at the center concerning the use of audiovisual materials in classroom instruction and the development of Title II cultural enrichment and physical education programs. Since its inception in 1966, more than 300 projects have been initiated in the six-county area served.

Scott, M. Gladys, ed. Research Methods in Health, Physical Education, Recreation. 2nd ed. Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1959. 544 pp. ED 044 275. MF only.

Methods for designing and conducting research related to health education, physical education, and recreation are described. The use of

libraries, the selection and definition of research problems, principles of statistical sampling, and data collection devices are presented. Instructions for the construction and validation of tests as well as techniques of data analysis are included. Descriptive methods, action research, historical and philosophical methods, and experimental designs are described. Techniques for writing research reports, including advice on style and presentation of data, are given. Interaction of research and the development of the curriculum are discussed.

Singer, Robert W., and Raymond A. Weiss, eds. Completed Research in Health, Physical Education, and Recreation, including International Sources. Vol. 12. Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1970. 296 pp. ED 045 603. MF only.

This compilation lists research completed in the areas of health, physical education, recreation, and allied areas during 1969. It is arranged in three parts. Part 1 is a subject heading index in which cross references are given for all the listings in parts 2 and 3. Part 2 is a bibliography of published research, citing 801 articles published in 127 of the 198 periodicals reviewed. Part 3 lists 877 master's and doctor's theses from 73 institutions offering graduate programs in health, physical education, recreation, and allied areas. Most thesis references are accompanied by abstracts of the research; all are numbered in alphabetical order according to the institution. Appended are lists of the periodicals reviewed and institutions reporting.

Sleet, David A. "Interdisciplinary Research Index on Play: A Guide to the Literature." Ph.D. dissertation, University of Toledo, May 1971. 104 pp. Available from University Microfilms. ED 058 146. Not available from EDRS.

This bibliography has as its chief aims: (a) expanding the availability of work related to the theory and research on play through topical listings of books and disciplines, (b) facilitating retrieval of cogent works on play through topical listings of books and articles in specialized disciplines, (c) exposing common research problems and innovative methods of studying play in hopes of fostering greater collaboration, and (d) facilitating integration of theory and research on play. It attempts to provide a useful tool in selecting relevant references to play within the disciplines of medicine, psychology, sociology, anthropology, psychiatry, education, physical education and recreation, health, child development, rehabilitation, philosophy, religion, and ancillary fields. Within each discipline area, entries are arranged by author. The coverage is extensive, though not comprehensive, up to August 1970. Most of the references are from the United States, Great Britain, and Canada. The scope has been limited to references in which the knowledge or use

of play contributes to an understanding of human behavior. Items related to play as a therapeutic technique or to the use of play-related therapy in behavior modification programs are excluded. A brief topical guide is provided.

Smith, Julian W. "The Scope of Outdoor Education." NASSP Bulletin [National Association of Secondary School Principals], 44, no. 256 (May 1960): 157-59. ED 023 490. Not available from EDRS.

Outdoor education represents a practical and sound approach toward the achievement of accepted educational objectives through the utilization of current resources. Moreover, it does not require the addition of another discipline to the curriculum. One of the most sensational and successful programs of outdoor education has been school camping. Outings commonly last a week and cover a wide variety of instructional units from physical education to the social sciences. Another use of outdoor resources has been the establishment of laboratories in the out-of-doors, covering a wide range of instructional units from the physical sciences, physical education, social sciences, and English.

Smoll, Frank L. "Areas and Facilities for Physical Education and Recreation. An Interpretive Bibliography." Madison: University of Wisconsin, ERIC Clearinghouse on Educational Facilities, January 1970. 100 pp. ED 035 266. MF & HC.

The references included were drawn from the documents received and processed to date by the ERIC Clearinghouse on Educational Facilities. They are organized into the following sections: (a) indoor physical education facilities, (b) outdoor physical education areas and facilities, (c) indoor and outdoor physical education areas and facilities, and (d) recreation areas and facilities.

Stier, William F., Jr. "An Investigation and Evaluation of Facility Workloads, with Specific Emphasis upon the Physical Education Departments of Selected Small Liberal Arts Institutions of Higher Learning." 1970. 29 pp. ED 049 681. MF & HC.

It is the thesis of this paper that many factors must be taken into consideration to determine faculty workloads and that the weights placed upon the various factors are of importance equal to the actual factors themselves. The first section reviews available literature on faculty workloads and lists (a) some of the questions asked in these investigations, (b) time spent by 75 faculty members at Southern Illinois University at 12 different activities related to their work, and (c) 19 factors that should be considered in determining faculty workload. The second section considers the purpose and results of a questionnaire that was sent to directors of physical education departments at 15 small 4-year liberal arts colleges in the Midwest. Ten responded to questions concerning (a) policy regulating

faculty workload; (b) factors involved in determining faculty workload; (c) compensation received for coaching responsibilities; (d) average hours of teaching load; (e) average time spent by the department chairman in various duties; and (f) factors considered a part of an individual physical education faculty member's total responsibility that are assumed in addition to regular teaching assignments, along with the compensation for these responsibilities.

---. "An Investigation into Nine General Areas and Forty-Four Specific Sub-Areas of Physical Education Currently in Existence within the Two Year Institutions of Higher Learning within the Continental United States, 1970-71." Sioux City, Iowa: Briar Cliff Colleges, May 1971. 19 pp. ED 058 875. MF & HC.

This study ascertained the present status of programs in 2-year college physical education departments. Questionnaires were sent to a national sample of 140 institutions; 74 or 53 percent were returned. Besides noting the size of the departments, the type of governance of the schools, and the size of the college communities, data on the training and experience of the faculty are reported. A majority of the colleges had liberal arts and vocational-technical curricula, and the physical education departments offered activity or service classes to the student body as a whole. A list of the types of activities and classes reported is included. Other details about the programs such as departmental requirements, grading practices, professional curricular offerings, intramurals and extramurals, the athletic programs, and the facilities available are described.

---. "The 1970-71 Status of Health, Physical Education, Recreation, and Athletics in Co-Educational Institutions of Higher Learning with an Enrollment below 2501." Sioux City, Iowa: Briar Cliff College, 1 June 1971. 18 pp. ED 058 861. MF & HC.

This investigation was undertaken to determine the present status of health, physical education, recreation, and athletic offerings at small liberal arts colleges throughout the U.S. The data are reported in a series of charts within the paper and were obtained by means of a 10-page questionnaire, covering 12 specific areas, filled out by the physical education department chairmen at the participating institutions. The 12 areas are (a) characteristics of the institution; (b) major offerings in health, physical education and recreation; (c) student population; (d) qualifications and responsibilities of staff; (e) curriculum activities; (f) major and minor (professional) curricular offerings; (g) intramurals; (h) extramurals; (i) athletic personnel; (j) facilities; (k) departmental budget; and (l) office management.

Stone Mountain Educational Projects. Children's Things: A Construction Guide for Play and Recreational Equipment for Parents, Teachers, Child Care Centers and Camps. Conway, Mass.: Stone Mountain Child Development

Center, 1972. 32 pp. Available from the Center. ED 068 162. MF & HC.

A construction guide is presented for play and recreational equipment for individual use and child care center and camp use. The bulk of the booklet gives detailed instructions for specific kinds of equipment, such as teepees, household appliances, bean bag boards, outdoor playground equipment, doll houses, bird houses, boats, puppets, and chairs. Costs are included in the directions. Woodworking suggestions are also offered along with details for connectors. Photographs and diagrams supplement the directions.

Stull, G. Alan. Abstracts of Research Papers 1972. Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1972. 137 pp. ED 065 797. MF only.

This volume is comprised of abstracts, precisely as submitted by the authors, of the 128 papers scheduled for presentation at the 1972 Houston convention of the American Association for Health, Physical Education, and Recreation. Although an attempt was made to group papers by subject content, this was not always possible. The name and address of each author, to whom inquiries for further information may be sent, appear after each abstract. An index of all authors appears at the end of the volume.

Ulrich, Celeste, and John E. Nixon. Tones of Theory. Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1972. 30 pp. ED 066 670. MF only.

This project represents the first step toward the development and articulation of a broad theory of physical education under the aegis of the American Association for Health, Physical Education, and Recreation. It is an attempt to identify and describe a theoretical structure of physical education as an area of scholarly study and research. The publication is directed toward members of the physical education profession and other concerned and interested individuals. It is an endeavor to articulate what physical education is, what it means, what it can become, how it can best be understood, and how it can best serve man's destiny.

Wisconsin Coordinating Committee for Higher Education. "Space Guidelines for Physical Education." Madison: the Committee, March 1966. 4 pp. ED 037 043. MF & HC.

The results of a questionnaire from two Wisconsin State universities suggest that the indoor and outdoor space requirements of the 1960 Illinois study satisfy minimal needs for physical education activities. Suggested guidelines for indoor and outdoor physical education space needs, based on student enrollment, are given.

Wilson, Ruth M. "Determination of Evaluative Devices for Adequate Assessment of Levels of Competence in Certain Physical Education Activities." Final Report. Seattle: University of Washington, July 1970. 45 pp. ED 047 338. MF & HC.

This investigation sought to study devices for assessing levels of performance and knowledge competency in basketball, swimming, and gymnastics. Subjects were women students at the University of Washington, 1968-69. For assessment of basketball competence, indications are that (a) evaluation of films of play by one individual can be highly reliable as a method of measuring skills but not knowledge; (b) film evaluation cannot assess knowledge; and (c) skill evaluation cannot be used to indicate knowledge. Swimming competency was assessed using both a written test and self-estimates by two random samples. Comparisons made between the test and self-estimates reveal comparable results for both samples. Conclusions indicate that (a) self-estimate cannot be the sole measuring device employed and (b) scores on the written test used here cannot be used as an accurate measure of competency. Evaluation by qualified judges of gymnastics performance indicates that film evaluation of skill, rating by the course instructor, and rating by a high-level performer who has competed can all be valid measures of competency.

JOURNAL CITATIONS

Adler, Jack D. "Programmed Lessons in Teaching a Complex Perceptual-Motor Skill." Perceptual and Motor Skills, 28 (June 1969): 900.

College Students; *Experiments; *Perceptual Motor Coordination; *Physical Education; *Programmed Instruction; *Teaching Methods.

Al-Talib, Nizar M. "Effects of Consonant and Dissonant Role Playing with High or Low Justification on Attitude Change toward Physical Education Courses." Research Quarterly of the AAHPER, 41, no. 4 (December 1970): 467-71.

*Changing Attitudes; *College Students; *Educational Attitudes; *Physical Education; Program Evaluation; *Role Playing.

Andrews, J. C. "Personality, Sporting Interest and Achievement." Educational Review, 23, no. 2 (February 1971): 126-34.

*Athletics; *Personality Studies; *Physical Education.

Annarino, Anthony A. "The Quest for Physical Education." Journal of Health, Physical Education and Recreation, 42, no. 5 (May 1971): 27-28.

*Curriculum Problems; *Educational Objectives; Personnel; *Physical Education; Program Development; Research Needs; *Teaching Techniques.

---, and others. "A Personal Philosophy of Physical Education." Journal of Health, Physical Education and Recreation, 41, no. 6 (June 1970): 24-30, 44-45.

Athletics; Citizenship; *Educational Experience; Individual Characteristics; *Objectives; *Philosophy; *Physical Education; Physical Fitness; *Skill Development; Teacher Attitudes.

Arnold, L. Eugene. "Detection and Management of Hyperkinetic Children in School," School Counselor, 18, no. 3 (January 1971): 177-84.

*Behavior Problems; Children; *Hyperactivity; Intervention; *Medical Treatment; Parent School Relationship; *Physical Education; *Physicians; Special Classes. Hyperkinetic children are usually helped by a coordinated program of medication, parent and child counseling, and teacher consultation. Medication usually facilitates everything else that is done for the child. Therefore, referral to and cooperation with the prescribing physician deserve special attention.

Baumgartner, Ted A., and Andrew S. Jackson. "Measurement Schedules for Tests of Motor Performance," Research Quarterly, 41, no. 1 (March 1970): 10-14.

College Students; *Educationl Research; Males; Measurement Techniques; Performance Criteria; *Performance Factors; *Physical Education; *Physical Fitness; Reliability; Secondary School Students.

Bell, Virginia Lee. "Visual and Verbal Feedback and Its Effect upon Acquisition and Retention of a Projectile Skill." Research Quarterly, 41, no. 1 (March 1970): 15-18.

College Students; *Feedback; Females; Performance Tests; *Physical Education; Psychomotor Objectives; *Psychomotor Skills; Retention; Skill Development.

Bennett, Joan. "Modules and Movement." Journal of Health, Physical Education and Recreation, 41, no. 4 (April 1970): 48-49.

Athletic Activities; *Curriculum Planning; Dance; Evaluation; Exercise (Physiology); Groups; *Innovation; *Integrated Activities; *Physical Education; *Schedule Modules.

Betts, John Rickards. "Home Front, Battle Field, and Sport during the Civil War." Research Quarterly of the AAHPER, 42, no. 2 (May 1971): 113-32.

*Athletics; *Civil War (United States); Leisure Time; Physical Education; *Physical Fitness; *Recreation; *Research.

Bird, Patrick J. "Tort Liability." Journal of Health, Physical Education and Recreation, 41, no. 1 (January 1970): 38-40.

*Accidents; *Employee Responsibility; *Legal Responsibility; Physical Education; Policy Formation; *Safety; School Activities; *Teacher Responsibility. Current overview of tort liability and its relationship to suits against the state and individual. Includes the concept of negligence and common legal defenses against actions of tort.

Burkhardt, Edward, and others. "Statistical Comprehension for Graduate Students in Physical Education: Test and Norms." Research Quarterly of the AAHPER, 42, no. 3 (October 1971): 235-43.

*Comprehension; *Graduate Students; *Measurement Instruments; Models; *Physical Education; Research Reviews (Publications); *Statistics; Tests.

Caldwell, Stratton F. "Toward a Humanistic Physical Education." Journal of Health, Physical Education and Recreation, 43, no. 5 (May 1972): 31-32.

*Changing Attitudes; *Educational Change; *Human Dignity; *Needs; *Physical Education.

Carron, Albert V., and Ronald G. Marteniuk. "Retention of a Balance Skill as a Function of Initial Ability Level." Research Quarterly of the AAHPER, 41, no. 4 (December 1970): 478-83.

Ability Grouping; *High School Students; Males; Memory; *Performance Tests; Physical Education; *Psychomotor Skills; *Retention Studies.

Clarke, David H., and G. Alan Stull. "Endurance Training as a Determinant of Strength and Fatigability." Research Quarterly, 41, no. 1 (March 1970): 19-26.

*College Students; Exercise (Physiology); Fatigue (Biology); Motor Development; *Motor Reactions; *Muscular Strength; *Physical Education; Testing; *Training.

Clarke, Kenneth S. "Accident Prevention Research in Sports: An Exploration of Reform." Journal of Health, Physical Education and Recreation, 40, no. 2 (February 1969): 65-70.

*Accident Prevention; *Athletics; Decision Making; Health Education; Injuries; Physical Education; *Recreational Activities; Research; Safety.

Clayton, Robert D., and John A. Torney, Jr. "First National Aquatics Conference on Professional Standards." Journal of Health, Physical Education and Recreation, 41, no. 4 (April 1970): 52-53.

*Conferences; *Physical Education; Planning; *Professional Personnel; *Standards; *Swimming; Teacher Selection.

Clifton, Marguerite. "A Developmental Approach to Perceptual-Motor Experiences." Journal of Health, Physical Education and Recreation, 41, no. 4 (April 1970): 34-37.

*Developmental Programs; Inservice Education; Parent Attitudes; *Perceptual Motor Learning; Personnel; *Physical Education; *Pilot Projects; *Preschool Children; Records (Forms); Swimming.

Collingwood, Thomas R., and Leonard Willett. "The Effects of Physical Training upon Self-Concept and Body Attitude." Journal of Clinical Psychology, 27, no. 3 (July 1971): 411-12.

*Body Image; *Physical Education; *Self Concept.

Cooper, Walter E. "Information Feedback in Motor Skill Learning--Theoretical Positions." Southern Journal of Educational Research, 5, no. 3 (July 1971): 152-57.

*Feedback; Learning Theories; Literature Reviews; Motor Development; *Perceptual Motor Learning; Performance Criteria; Physical Education; *Psychomotor Skills; *Theories. Article concludes with emphasis on the necessity for physical education programs to be based on sound scientific evidence.

Cratty, Bryant J., and Frank E. Amatelli. "Figural Aftereffects Elicited by Gross Action Patterns: The Role of Kinesthetic Aftereffects in the Arm-Shoulder Musculature." Research Quarterly of the AAHPER, 40, no. 1 (March 1969): 23-29.

*Figural Aftereffects; *Kinesthetic Perception; Perceptual Development; *Perceptual Motor Coordination; Physical Education; Research; Sensory Experience. Study supported by a grant from the National Science Foundation, GB-5664.

Dunham, Paul, Jr. "Specificity and Extended Practice." Research Quarterly of the AAHPER, 41, no. 4 (December 1970): 484-88.

Ability; College Students; *Eye Hand Coordination; Individual Differences; Males; *Performance Factors; *Physical Education; Psychomotor Skills. Tasks were mirror tracing and pursuit rotor.

Eckert, Helen M. "A Comparison of Delayed Static and Dynamic Visual Feedback." Research Quarterly, 41, no. 1 (March 1970): 39-43.

Behavior; *Feedback; *Learning; Measurement; Physical Education; *Sensory Training; *Video Tape Recordings; *Visual Discrimination.

Falls, Harold B. "Circulatory Response to Cold Showers: Effects of Varied Time Lapses before Exercise." Research Quarterly of the AAHPER, 40, no. 1 (March 1969): 45-49.

*Blood Circulation; *Heart Rate; Physical Activities; *Physical Education; Research.

Faria, Irvin E. "Cardiovascular Response to Exercise as Influenced by Training of Various Intensities." Research Quarterly, 41, no. 1 (March 1970): 44-50.

Cardiovascular System; *College Students; *Exercise (Physiology); *Heart Rate; Males; Motor Reactions; Physical Activities; *Physical Education; Stimuli; *Training.

Felshin, Jan. "Sport and Modes of Meaning." Journal of Health, Physical Education and Recreation, 40, no. 5 (May 1969): 43-44.

*Athletics; *Philosophy; Physical Education.

Foerster, Leona M. "As They Move They Learn." Instructor, 81, no. 7 (March 1972): 59.

Communication Skills; *Language Instruction; *Listening Comprehension; Listening Skills; Oral Communication; *Oral Expression; *Physical Education; Recreational Activities; Speech Skills. Play experiences provide a great medium for strengthening communication skills in a meaningful and purposeful way.

Forman, Edward. "The Inclusion of Visually Limited and Blind Children in a Sighted Physical Education Program." Education of the Visually Handicapped, 1, no. 4 (December 1969): 113-15.

*Exceptional Child Education; Physical Activities; *Physical Education; Regular Class Placement; Sensory Aids; *Visually Handicapped.

Fraleigh, Warren P. "An Instructional Experiment in Actualizing the Meaning of Man as a Moving Being." Journal of Health, Physical Education and Recreation, 40, no. 1 (January 1969): 53-58.

*Human Body; *Human Development; Instructional Innovation; *Physical Education; *Self Concept; *Social Psychology.

Gallagher, James D. "Motor Learning Characteristics of Low-Skilled College Men." Research Quarterly, 41, no. 1 (March 1970): 59-67.

*Athletic Activities; *Coordination; Learning Characteristics; *Physical Education; *Psychomotor Skills; Reliability; Training.

Godwin, Margaret A., and Richard A. Schmidt. "Muscular Fatigue and Discrete Motor Learning." Research Quarterly of the AAHPER, 42, no. 4 (December 1971): 374-82.

Bibliographic Citations; Exercise (Physiology); *Fatigue (Biology); *Females; *Learning; *Physical Education; *Psychomotor Skills; Research.

Gray, Roy R. "Trends in Faculty-Load Weighting." Journal of Health, Physical Education and Recreation, 41, no. 7 (September 1970): 38-39.

*College Environment; Males; *Physical Education; *Statistical Studies; *Teaching Load.

Grieve, Andrew. "State Legal Requirements for Physical Education." Journal of Health, Physical Education and Recreation, 42, no. 4 (April 1971): 19-23.

Curriculum; Health; *Physical Education; Public Schools; *State Laws; Surveys.

Grose, Joel E. "Relationship of the Pattern of Movements, Including Rhythm and Terminal Success." Research Quarterly of the AAHPER, 40, no. 1 (March 1969): 55-61.

Individual Differences; *Perceptual Motor Coordination; *Physical Education; *Psychomotor Skills; Research; Rhythm.

Gruber, Joseph J. "The Significance of Motor Experience as Basic Education." Education, 93, no. 1 (September/October 1972): 39-41.

Attitudes; *Exercise (Physiology); Mental Health; *Motor Development; Objectives; *Physical Development; *Physical Education; Psychomotor Skills; Socialization. Author briefly summarizes the research and objectives of physical education programs.

---. "Implications of Physical Education Programs for Children with Learning Disabilities." Journal of Learning Disabilities, 2, no. 11 (November 1969): 593-99.

Academic Achievement; Educational Theories; *Exceptional Child Education; Intellectual Development; *Learning Disabilities; Perceptual Motor Coordination; *Physical Education; Research Methodology; Research Reviews (Publications).

Hale, Sharon McCarthy. "Possible Pythagorean Influences on Plato's Views of Physical Education in the Republic." Research Quarterly of the AAHPER, 40, no. 4 (December 1969): 692-99.

*Physical Education; *Plato; Pythagoras; Republic.

Harris, Margaret L. "A Factor Analytic Study of Flexibility." Research Quarterly of the AAHPER, 40, no. 1 (March 1969): 62-70.

*Factor Analysis; Human Body; Individual Characteristics; Physical Characteristics; *Physical Education; *Physical Fitness; Research; *Tests; Composite Tests; *Human Body Flexibility; Joint Action. Study submitted in partial fulfillment of the requirements for the Ph.D. degree at the University of Wisconsin, 1967.

Hendry, L. B. "A Personality Study of Highly Successful and 'Ideal' Swimming Coaches." Research Quarterly of the AAHPER, 40, no. 2 (May 1969): 299-304.

*Personality Studies; *Physical Education; Research; Statistical Analysis; Success Factors; *Trainers; Swimming.

Herkowitz, Jacqueline. "A Perceptual-Motor Training Program to Improve the Gross Motor Abilities of Pre-Schoolers." Journal of Health, Physical Education and Recreation, 41, no. 4 (April 1970): 38-42.

*Athletic Equipment; *Developmental Programs; Educational Experience; *Perceptual Motor Learning; *Physical Education; Pilot Projects; *Preschool Children; Psychomotor Skills; Self Concept; Sensory Training. Twelve tasks with their materials, instructions, and individual sensory modalities are described and illustrated.

Hilsendager, Donald R., and others. "Comparison of Speed, Strength and Agility Exercises in the Development of Agility." Research Quarterly of the AAHPER, 40, no. 1 (March 1969): 71-75.

Physical Activities; *Physical Development; Physical Education; *Physical Fitness; Research; *Agility.

Hoffman, Hubert A. "National Survey of Professional Preparation for the Elementary School Physical Education Specialist." Journal of Health, Physical Education and Recreation, 43, no. 2, (February 1972): 25-28.

Colleges; *Elementary School Teachers; *National Surveys; *Physical Education; *Professional Education; Program Content; Questionnaires; *Specialists; Tables (Data); Universities. Report of a project completed by the Elementary School Physical Education Commission.

Humphrey, James H. "The Use of Motor Activity Learning in the Development of Science Concepts with Slow Learning Fifth Grade Children." Journal of Research in Science Teaching, 9, no. 3 (1972): 261-66.

Activity Learning; *Concept Teaching; *Elementary School Science; *Instruction; *Physical Education; *Slow Learners. Students taught science concepts through physical education activities achieved higher scores on an objective test of science concepts.

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*Creative Activities; *Dance; *Folk Culture; Physical Education; Recreational Programs.

Ismail, A. H., and others. "Relationships among Intellectual and Non-intellectual Variables." Research Quarterly of the AAHPER, 40, no. 1 (March 1969): 83-92.

Academic Ability; *Child Development; Coordination; Factor Analysis; *Intelligence; *Physical Education; Physical Fitness; *Psychomotor Skills; Research.

Jernigan, Sara Staff. "The International Olympic Academy--A Medium for World Understanding." Journal of Health, Physical Education and Recreation, 42, no. 5 (May 1971): 8, 10-11.

*Athletic Activities; Cultural Exchange; *International Organizations; *Philosophy; *Physical Education; Recreational Activities; *Summer Institutes.

Johnson, Robert E., Jr., and Don R. Kirkendall. "Psychophysiologic Responses to Rotary Motions." Research Quarterly of the AAHPER, 41, no. 4 (December 1970): 489-95.

*Exercise (Physiology); Males; Overt Response; *Performance Factors; *Physical Education; Psychomotor Skills; *Psychophysiology; Sensory Training.

Jones, Billie J., and James K. Brewer. "An Analysis of the Power of Statistical Tests Reported in the Research Quarterly." Research Quarterly of the AAHPER, 43, no. 1 (March 1972): 23-30.

Bibliographic Citations; *Physical Education; *Research Problems; *Research Tools; *Statistical Analysis; Surveys; Tables (Data); *Tests of Significance.

Katch, Frank I., and others. "Effects of Physical Training on the Body Composition and Diet of Females." Research Quarterly of the AAHPER, 40, no. 1 (March 1969): 99-104.

*Dietetics; Females; *Physical Education; Physical Fitness; Research; Weight. Study supported in part by U.S. Public Health Service Grant No. HD-00235 and Faculty Research Grant No. 152, Institute of Environmental Stress, University of California at Santa Barbara, 1967-68.

Kirkendall, Don R., and Joseph J. Gruber. "Canonical Relationships between the Motor and Intellectual Achievement Domains in Culturally Deprived High School Pupils." Research Quarterly of the AAHPER, 41, no. 4 (December 1970): 496-502.

Academic Achievement; *Cognitive Development; *Culturally Disadvantaged; Developmental Tasks; Intelligence Level; *Low Achievers; *Physical Education; *Psychomotor Skills.

Kovich, Maureen. "Sport as an Art Form." Journal of Health, Physical Education and Recreation, 42, no. 8 (October 1971): 42.

*Cultural Enrichment; *Physical Education; *Psychomotor Skills; *Self Actualization.

Kral, Paul A. "Motor Characteristics and Development of Retarded Children: Success Experience." Education and Training of the Mentally Retarded, 7, no. 1 (February 1972): 14-21.

Intellectual Development; *Mentally Handicapped; *Motor Development; Physical Education; *Research Reviews (Publications). Reviewed are normal-retarded comparisons in motor development, the relationship between motor and intellectual ability, and the effects of physical training upon motor performance and IQ.

Kretchmar, R. Scott, and William A. Harper. "Why Does Man Play?" Journal of Health, Physical Education and Recreation, 40, no. 3 (March 1969): 57-58.

Athletic Activities; *Educational Philosophy; *Motivation; *Physical Activities; *Physical Education; *Recreational Activities.

Landers, Daniel M. "Psychological Femininity and the Prospective Female Physical Educator." Research Quarterly of the AAHPER, 41, no. 2 (May 1970): 164-70.

*Females; *Individual Differences; *Physical Education; *Psychological Studies; *Women Teachers.

Lansley, Keith L., and Maxwell L. Howell. "Play Classification and Physical Education." Journal of Health, Physical Education and Recreation, 41, no. 7 (September 1970): 44-45, 59.

*Behavioral Science Research; *Games; *Physical Education; *Socio-cultural Patterns.

Ley, Katherine. "Teaching Understandings in Physical Education." Journal of Health, Physical Education and Recreation, 42, no. 1 (January 1971): 21-22.

*Concept Teaching; Curriculum; *Educational Objectives; Health Education; *Physical Activities; *Physical Education; Teaching Methods. Report from the Committee on Understandings and Knowledge in Physical Education. Discusses development of the award-winning book Knowledge and Understanding in Physical Education.

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College Students; Diagrams; Females; Films; *Physical Education; *Physiology; *Psychomotor Skills; *Research Methodology; *Systems Approach; Video Tape Recordings.

Magel, John R. "Propelling Force Measured during Tethered Swimming in the Four Competitive Swimming Styles." Research Quarterly, 41, no. 1 (March 1970): 68-74.

*Athletic Activities; College Students; *Motor Reactions; *Muscular Strength; *Physical Education; Physical Fitness; Testing; Training.

McAfee, Floyd H. "A Balance of Pride." Journal of Health, Physical Education and Recreation, 41, no. 7 (September 1970): 24-27.

Affective Behavior; *Athletics; *Negroes; *Physical Education; *Racial Attitudes; *Teaching Procedures; Teamwork. In offering a solution to black boycotts, a black coach summarizes patterns of good coaching practices which have merit for all professionals working with young athletes.

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*Athletics; *College Students; *Females; *Heart Rate; *Physical Education; Research; Tests.

Metheny, Eleanor. "This 'Thing' Called Sport." Journal of Health, Physical Education and Recreation, 40, no. 3 (March 1969): 59-60.

*Athletic Activities; *Athletics; *Educational Philosophy; *Physical Education.

Metz, Kenneth F., and John F. Alexander. "An Investigation of the Relationship between Maximum Aerobic Work Capacity and Physical Fitness in Twelve- to Fifteen-Year-Old Boys." Research Quarterly, 41, no. 1 (March 1970): 75-81.

Exercise (Physiology); *Motor Development; *Physical Activities; Physical Education; *Physical Fitness; Psychomotor Skills; *Secondary School Students; Testing.

Mohr, Dorothy R. "Identifying the Body of Knowledge." Journal of Health, Physical Education and Recreation, 42, no. 1 (January 1971): 23-24.

*Cognitive Development; *Concept Teaching; Exercise (Physiology); Health Education; Personal Adjustment; Physical Activities; *Physical Education; *Psychomotor Skills; *Social Adjustment; Teaching Procedures. Discusses utilization of the book Knowledge and Understanding in Physical Education.

Mosser, Gloria. "Movement Education. The Why and How." Grade Teacher, 88, no. 4 (December 1970): 60-64.

*Early Childhood Education; *Physical Education; *Teaching Methods.

Mudra, Darrell. "The Coach and the Learning Process. A Perceptual Approach to Winning." Journal of Health, Physical Education and Recreation, 41, no. 5 (May 1970): 26-29, 56.

Athletics; Attitudes; *Learning Processes; *Learning Theories; *Perception; *Physical Education; *Positive Reinforcement; Self Concept; Training Techniques.

Norrie, Mary Lou. "Number of Reinforcements and Memory Trace for Kinesthetically Monitored Force Reproduction." Research Quarterly of the AAHPER, 40, no. 2 (May 1969): 338-42.

*Kinesthetic Perception; Physical Education; Reinforcement; Research; *Retention; Statistical Analysis.

Oliver, James N. "Blindness and the Child's Sequence of Development. Physical Education for the Visually Handicapped." Journal of Health, Physical Education and Recreation, 41, no. 6 (June 1970): 37-39.

*Activity Learning; Athletic Activities; *Blind Children; Concept Formation; Equipment; *Needs; *Physical Development; *Physical Education; Playgrounds; Skill Development.

"Perceptual-Motor Development: Action with Interaction. Report of an AAHPER Conference." Journal of Health, Physical Education and Recreation, 42, no. 1 (January 1971): 36-39.

*Conference Reports; Curriculum; *Development Programs; Eye Hand Coordination; *Perceptual Motor Learning; Performance Factors; *Physical Education; *Psychomotor Skills; Sensory Training; Transfer of Training.

Pollock, Michael L. "Expose Undergraduate Students to Research Early." Journal of Health, Physical Education and Recreation, 41, no. 5 (May 1970): 25.

*Curriculum Development; Graduate Study; *Health Education; Observation; Participation; *Physical Education; *Research Skills; *Undergraduate Study.

Pommerenke, Robert L. "Basic Books in Physical Education." Journal of Health, Physical Education and Recreation, 42, no. 4 (April 1971): 35-40.

*Annotated Bibliographies; Curriculum; Educational Administration; Handicapped; History; *Library Material Selection; Philosophy; *Physical Education; *Physical Fitness; Teacher Education.

"Professional Preparation of the Administrator of Athletics." Journal of Health, Physical Education and Recreation, 41, no. 7 (September 1970): 20-23.

*Administrator Qualifications; *Athletics; *College Preparation; *Graduate Study; *Physical Education.

Reid, Louis Arnaud. "Sport, The Aesthetic and Art." British Journal of Educational Studies, 18, no. 3 (October 1970): 245-58.

*Athletics; *Curriculum Evaluation; *Dance; *Games; *Physical Education.

"A Report from the Council for National Cooperation in Aquatics." Journal of Health, Physical Education and Recreation, 41, no. 5 (May 1970): 10, 12.

*Administration; Conference Reports; Elections; History; *National Programs; Organization; *Physical Education; *Swimming; *Workshops.

"Required Specialized Preparation for Coaching." Journal of Health, Physical Education and Recreation, 42, no. 4 (April 1971): 12-13.

*Athletic Coaches; *Certification; *Course Content; Degree Requirements; Inservice Education; *Physical Education; *Program Proposals; New York State.

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